

**NC Department of Transportation
Preliminary Site Assessment
State Project: R-4047
WBS Element: 34599.1.1**

**David J. Sutton Property
Site #2
October 23, 2009**

**AMEC Earth and Environmental, Inc. of North Carolina
AMEC Project: 562114047**




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1.0 INTRODUCTION

In accordance with the North Carolina Department of Transportation (NCDOT) Notice to Proceed dated August 24, 2009, AMEC Earth and Environmental, Inc. of North Carolina (AMEC) has performed a Preliminary Site Assessment (PSA) for the David J. Sutton Property (the Site) to be acquired for a road widening project along Hwy 209 (Crabtree Road). David J. Sutton owns the property, which is identified as Site #2 within the NCDOT R-4047 design project. The property is located on Access Road in Waynesville, Haywood County, North Carolina. The investigation was conducted in accordance with AMEC's Technical and Cost proposal dated August 24, 2009.

NCDOT contracted AMEC to perform a PSA on the David J. Sutton Property due to former usage of Underground Storage Tanks (UST) on the property. The property currently operates as David's Home Entertainment (the Site) that sells hot tubs, pool tables, televisions, gazebos, etc. The PSA was performed to determine if soils have been impacted by petroleum compounds as a result of past or present uses of the property within the proposed expanded right-of-way (ROW). The investigation was specifically completed to determine the presence or absence of petroleum hydrocarbons in soil along the proposed ROW and to assess ground water quality in one onsite and offsite monitoring well.

The following report describes our field investigations and results of chemical analyses. It includes the evaluation of the analytical data with regards to the presence or absence of soil contamination within the proposed right-of-way (ROW) and estimates the extent of soil contamination.

1.1 Site Location and History

The David J. Sutton Property is located on the west side of Hwy 209 (Crabtree Road) approximately 50 feet north of Access Rd in Waynesville, Haywood County, North Carolina. It is located within the Sedimentary and Metamorphic sediments of the Blue Ridge Belt Physiographic Province of western North Carolina. Figure 1 shows the site location and vicinity.

AMEC studied the NCDENR UST Database for Incident Management and Registered Facilities and did not find any incidents reported for this site. Previously, a business called Quality Auto Service and Parts operated at this location. Mr. Sutton believes that the

applicable USTs were removed in the mid-1980s. In 1995 NCDOT contracted Front Royal Environmental Services to conduct soil borings and sampling on the property. Soil borings were performed near the former tank bed location. However, no soil borings were conducted near the former pump island.

1.2 Site Description

A single story building occupies the Site. The proposed road widening will traverse the entire property of Site #2. Evidence of the former tank beds is no longer present. There are no monitoring wells on site. Appendix 1 includes a photo log for Site #2. Based on the report provided by Schnabel Engineering South of Greensboro, North Carolina, no USTs were detected in the areas surveyed. Figure 2 presents the Site Location Map.

The Property northeast of the Site is a commercial property occupied by Gem Motel. The property to the southwest is a commercial property occupied by Taco Bell. The properties to the west and northwest are residential.

2.0 GEOLOGY

2.1 Regional Geology

The David J. Sutton Property is located within the Biotite Gneiss group of the Blue Ridge Belt Physiographic Province of western North Carolina. The Biotite Gneiss group is migmatic, interlayered and gradational with biotite garnet gneiss and amphibolite.

2.2 Site Geology

Site geology was observed through the sampling of 12 shallow direct push probe borings onsite. Borings extended to total depths ranging from 12 to 18 feet below ground surface (bgs). Soils generally consisted of micaceous silt. Boring logs are presented in Appendix 2. Saturated conditions (ground water) were first encountered in the borings at depths ranging from 12 to 17 feet bgs across the Site. One direct push boring, S2-SB5, was later extended with air rotary drilling in order to facilitate the installation of temporary monitoring well S2-MW1. This well intercepted partially weathered rock (PWR) at 30 feet bgs and had a total depth of 37 feet bgs. This boring log with construction information is also found in

Appendix 2. An offsite temporary well drilled through a cobble layer until 10 feet bgs and then through a micaceous silt saprolite until total depth of 29 feet bgs.

3.0 FIELD ACTIVITIES

3.1 Preliminary Activities

Prior to commencing field activities at the site, several tasks were accomplished in preparation for the subsurface investigation. The Health and Safety Plan (HSP) was modified to include the site-specific health and safety information necessary for the field activities. North Carolina-1-Call was contacted to facilitate the location of underground utilities in the vicinity of selected boring locations. Priority Underground Locating Services of Huntersville, North Carolina was coordinated by AMEC for utility locating services. SAEDACCO (South Atlantic Environmental Drilling and Construction Co.) of Fort Mill, South Carolina was retained by AMEC to perform the direct push sampling for soil borings and air rotary drilling for temporary well installations. AMEC coordinated with Schnabel Engineering South (Schnabel) who performed two geophysical surveys (electromagnetic and ground penetrating radar) onsite during August. The geophysical results were reviewed and discussed at the completion of each survey. Prism Laboratories, Inc. was contacted for acquisition of sample bottles. Soil boring locations focused around the former tank bed and dispensers, with some boring locations placed between to evaluate whether the connecting piping areas were free from soil contamination.

3.2 Site Reconnaissance

AMEC personnel completed site reconnaissance on August 5, 2009. The area was visually examined for the presence of any current UST or areas/obstructions that could potentially affect the subsurface investigation and the geophysical subcontractor was met in the field. Marking of boring locations occurred on August 25, 2009.

3.3 Well Survey

No well survey was performed as part of this PSA and no water supply wells were observed by AMEC on the site.

3.4 Soil Sampling

Soil boring occurred on August 25, 2009 at Site #2. Twelve direct push soil borings were drilled adjacent to former tank beds and dispenser islands on Site #2. Figure 2 presents the Site Map with sample locations. These samples were staggered to optimize the likelihood of intercepting any potential soil contamination. The first sample (SB-1) was placed on the western side of Site #2, north of where the former tank beds were located. Subsequent samples SB-2 through SB-6 were staggered throughout the former tank bed area. The points were typically 20 feet apart in an east west direction and roughly 10 feet apart in a north south direction. Samples SB-10 through SB-12 were staggered throughout the former pump island location, directly in front of the existing building. Samples SB-7 through SB-9 were staggered throughout the area where the piping connecting the tank beds and pump island would have been.

Drilling and sample collection of the first four soil borings, SB-1 through SB-4, did not show any signs of staining, odor or significant Photo Ionization Detector (PID) reading. Samples from soil boring SB-5 however did indicate soil contamination with a maximum PID reading of 1551 parts per million (ppm) from a depth between 14 and 15 ft bgs. The subsequent soil borings SB-6 through SB-8 did not indicate significant readings on the PID, nor show visible or olfactory signs of petroleum impact. Soil boring SB-9 did indicate soil contamination with a maximum PID reading of 1,750 ppm. The remaining soil borings SB-10 through SB-12 did not indicate significant readings on the PID, nor show visible or olfactory evidence of petroleum impact.

Overall for the Site, evidence of potential soil contamination was identified by field observations (i.e. petroleum odors, petroleum staining, strong PID response) in the two borings, SB5 and SB9. PID screening results are incorporated in Table 1.

Soil samples were collected in accordance with EPA protocols in laboratory-supplied containers. The soil samples for Total Petroleum Hydrocarbons (TPH) –Gasoline Range Organics (GRO) analysis were collected using the 5030 prep method with methanol preservation. Samples for TPH-Diesel Range Organics (DRO) analysis were collected in 4oz. glass containers. Once placed in the containers, the samples were labeled with the sample number, time of collection, date of collection, name of the collector, and the requested analysis. The samples were packed on ice, and then hand delivered to Prism Laboratories, a North Carolina Certified Laboratory following proper chain-of-custody procedures.

3.5 Groundwater Sampling

Two temporary groundwater wells were installed on August 27 and abandoned on September 3, 2009. Sampling of these wells occurred on August 28, 2009 for the Site #2 PSA. Well S2-MW1 was installed west of the David's Home Entertainment building, coincident with soil boring SB-5, which indicated the highest PID readings. During the purging and sampling of S2-MW1 a petroleum odor was noticed from the groundwater. Temporary well S2-MW2 was installed offsite, approximately 300 feet northeast and topographically down slope near ramp B as shown in Figure 3.

Odor was detected in the groundwater sample S2-MW1. No signs of discoloration or odor were detected from groundwater sample S2-MW2, but the well was not productive and it went dry during the purging process. The groundwater samples were collected in accordance with EPA protocols in laboratory-supplied containers. The water samples for the 625 analysis were collected using 1 Liter unpreserved amber bottles. The samples for 601/602 analysis were collected in Volatile Organic Analysis bottles with hydrochloric acid preservation. Once placed in the containers, the samples were labeled with the sample number, time of collection, date of collection, name of the collector, and the requested analysis. The samples were packed on ice, and then hand delivered to Prism Laboratories, a North Carolina Certified Laboratory following proper chain-of-custody procedures.

3.6 Surface Water Sampling

One surface water source was sampled for the Site #2 PSA on August 28, 2009. Sample S2-SW1 was sampled southeast of the building, from the box culvert at the intersection of Hwy 209 and Access Road. This sample location is also shown in Figure 3, in relation to Site #2.

No signs of discoloration or odor were detected in the surface water sample. The water sample was collected in accordance with EPA protocols in laboratory-supplied containers. The water sample for the 625 analysis was collected using 1 Liter unpreserved amber bottles. The sample for 601/602 analysis was collected in Volatile Organic Analysis bottles with hydrochloric acid preservation. Once placed in the containers, the samples were labeled with the sample number, time of collection, date of collection, name of the collector, and the requested analysis. The samples were packed on ice, and then hand delivered to Prism Laboratories, a North Carolina Certified Laboratory following proper chain-of-custody procedures.

4.0 RESULTS

4.1 Soil Sampling Results

AMEC conducted soil sampling at the Site on August 25, 2009. The purpose of the sampling was to determine if releases of petroleum hydrocarbons had occurred, and if so, to estimate the volume of soil that might require special handling during construction activities. The sampling was accomplished using direct push methods accompanied by field screening for organic vapors with a PID. The laboratory soil results are tabulated in Table 1 and shown on Figure 4.

A minimum of one soil sample was collected from each of the 12 soil borings from Site #2. If impacted soil was identified, additional soil samples were obtained. PID readings and other field observations warranted that eight additional samples be acquired. Analyses of soil samples for DRO indicated two boring locations with concentrations above the 10 mg/kg NCDENR Initial Action Level for TPH in soil. Sample S2-SB1-1 from boring SB1 at the 6-10 ft bgs interval was reported with 30 mg/kg. This boring location was near the rear of the building. Two samples from boring SB9 located in front of the existing building and near the former pump island reported DRO concentrations. Sample SB9-2, analyzed at the 1-2 foot interval, was measured with a DRO concentration of 95 mg/kg while the deeper sample SB9-1 from the 7-9 foot interval was reported with 210 mg/kg.

Laboratory analyses indicate four samples from three borings had concentrations of GRO that exceeded the 10 mg/kg NCDENR Initial Action Level for TPH in soil. In boring SB9, mentioned above as located near the former pump island, samples SB9-1 and SB9-2 had concentrations of 1,800 mg/kg and 65 mg/kg, respectively. The other two samples with reported GRO detections came from the deeper samples within borings SB5 and SB6 located near the former UST bed. In boring SB5, a concentration of 63 GRO mg/kg was measured in SB5-1 from 14-15 feet bgs. In boring SB-6, a concentration of 16 mg/kg was reported in SB6-1 from 13-14 feet bgs.

Copies of the original laboratory report and chain-of-custody documentation are included as Appendix 3.

4.2 Extent of Impacted Soils

This investigation and analytical program were implemented to determine the presence or absence of petroleum hydrocarbons and, if possible, to estimate the volume of impacted soil present within the proposed expanded ROW. For the purposes of this PSA it was assumed that soil excavation activities would not extend into groundwater.

The area of greatest concern of GRO/DRO concentrations was focused near boring SB-9 with some lesser impact at borings SB-5, SB-6 and SB-1. SB-1 is not within the proposed expanded ROW; therefore the contamination “footprint” would be represented by the remaining contaminated soil borings. AMEC estimates that a contaminated “footprint” within the expanded ROW potentially covers an area of 1316 square feet. This area, shown in Figure 5, ranges in thickness from roughly 14 feet (the entire unsaturated soil column) in the area of BS-9 to a deeper 3 foot section in the area of SB-5 and SB-6.

The current design is for the expanded ROW section of Site #2 to be an area of fill. If that remains the case then potentially the impacted soil will not be intercepted by future NCDOT construction activities. However if the design changes and excavation occurs in this area then potentially a soil volume of up to 11,188 cubic feet or 414 cubic yards could be intercepted down to the water table. This estimate assumes that half of the impacted footprint area would exhibit contamination with the maximum vertical thickness of 14 feet and half would exhibit contamination with the minimum vertical thickness of 3 feet.

4.3 Groundwater Sampling Results

AMEC conducted onsite and offsite groundwater sampling for the Site #2 temporary wells on August 28, 2009. The purpose of the onsite sampling of S2-MW1 was to determine if potential Site #2 releases of petroleum hydrocarbons had impacted the underlying groundwater. Table 2 presents results of groundwater analyses for volatile and semi-volatile organic compounds for S2-MW1 and S2-MW2. These data are also shown in Figure 3. The sample from onsite well S2-MW1, located near the former UST bed, exhibited benzene, toluene, ethylbenzene, xylenes (BTEX) and naphthalene, which are typical gasoline components. The levels of benzene, naphthalene, and toluene exceeded the 2L Groundwater Protection standards. None of the gross contaminant levels (GCL) were exceeded. Results from the offsite well, S2-MW2, sample reported detections of the same five gasoline components but at lower concentrations, suggesting a groundwater plume stemming from Site #2 has migrated offsite to the northeast. Only the benzene

concentration, measured in the offsite well S2-MW2 exceeded its 2L groundwater protection standard.

4.4 Surface Water Sampling Results

AMEC conducted surface water sampling at the Site on August 28, 2009. The purpose of the sampling was to determine if potential soil or groundwater impact from petroleum hydrocarbons had intercepted surface water. Analysis of the surface water sample for volatile and semi-volatile organic compounds did not indicate any detectable concentrations. These results are also summarized in Table 2 and Figure 3.

5.0 CONCLUSIONS

The following conclusions are based upon AMEC's evaluation of field observations and laboratory analyses of samples collected from the Site on August 25 and 28, 2009.

- The property formerly operated as Quality Auto Service and multiple USTs were in use until closure by removal in mid-1980s.
- The current commercial building at the Site is occupied by a home entertainment store.
- High PID readings indicated the possibility of petroleum contaminants in two of twenty soil samples from two of twelve borings.
- Laboratory analyses of soil samples confirmed DRO detection of >10 mg/kg NC Action Level in three samples from two borings (SB1-1, SB9-1, SB9-2).
- Laboratory analyses of soil samples confirmed GRO detection of >10 mg/kg NC Action Level in four samples in three borings (SB5-1, SB6-1, SB9-1, SB9-2).
- The highest concentrations of both GRO and DRO occur at boring SB-9. This sample site is most likely where the former dispenser pump island was previously located.
- The concentrations of GRO and DRO detected at sample sites SB-1, SB-5 and SB-6 correlate to the former tank bed location.
- Approximately up to 414 cubic yards of petroleum-contaminated soil is potentially present within the Site #2 portion of the proposed ROW.

- Sampling results from the onsite temporary well indicated the presence of BTEX compounds, typical of gasoline, dissolved in groundwater at concentrations above groundwater protection standards. The same compounds, at lower concentrations, were measured in the assumed downgradient offsite well.

6.0 RECOMMENDATIONS

If NCDOT intercepts soil in the contaminated area, AMEC recommends the following action:

- Segregation during soil excavation with proper disposal of potentially petroleum-impacted soil during roadway improvement construction operations.

TABLES

Table 1
Soil Sampling Analytical Results, DRO-GRO
David J. Sutton Property - Site 2
Waynesville, Haywood Co., North Carolina

SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (ft bgs)	EPA Method 8015B	
			DRO (mg/kg)	GRO (mg/kg)
NC Action Levels			10	10
S2-SB1-1	8/25/2009	6 - 10.5	30	<6.9
S2-SB2-1	8/25/2009	7 - 10	<9.6	<6.8
S2-SB3-1	8/25/2009	6 - 8	<9.9	<7.1
S2-SB4-1	8/25/2009	1 - 5	<10	<7.1
S2-SB5-1	8/25/2009	14 - 15	<6.9	63
S2-SB5-2	8/25/2009	7 - 14	<8.9	<6.4
S2-SB6-1	8/25/2009	13 - 14	<10	16
S2-SB6-2	8/25/2009	7 - 11	<9.8	<7.0
S2-SB7-1	8/25/2009	10 - 16	<8.8	<6.3
S2-SB7-2	8/25/2009	6 - 10	<10	<7.3
S2-SB8-1	8/25/2009	10 - 11	<9.8	<7.0
S2-SB8-2	8/25/2009	1 - 10	<11	<7.6
S2-SB9-1	8/25/2009	7 - 9	<9.1 / 210*	1,800
S2-SB9-2	8/25/2009	1 - 2	95	65
S2-SB10-1	8/25/2009	7 - 9	<8.7	<6.3
S2-SB10-2	8/25/2009	3 - 5	<8.5	<6.1
S2-SB11-1	8/25/2009	4 - 7	<9.1	<6.5
S2-SB11-2	8/25/2009	2 - 4	<9.0	<6.4
S2-SB12-1	8/25/2009	4 - 5	<8.9	<6.4
S2-SB12-2	8/25/2009	5 - 9	<9.0	<6.5

NOTES:

bgs = below ground surface

Bold Concentrations Exceed Action Levels

DRO = Diesel Range Organics

GRO = Gasoline Range Organics

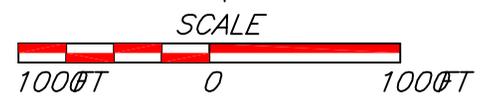
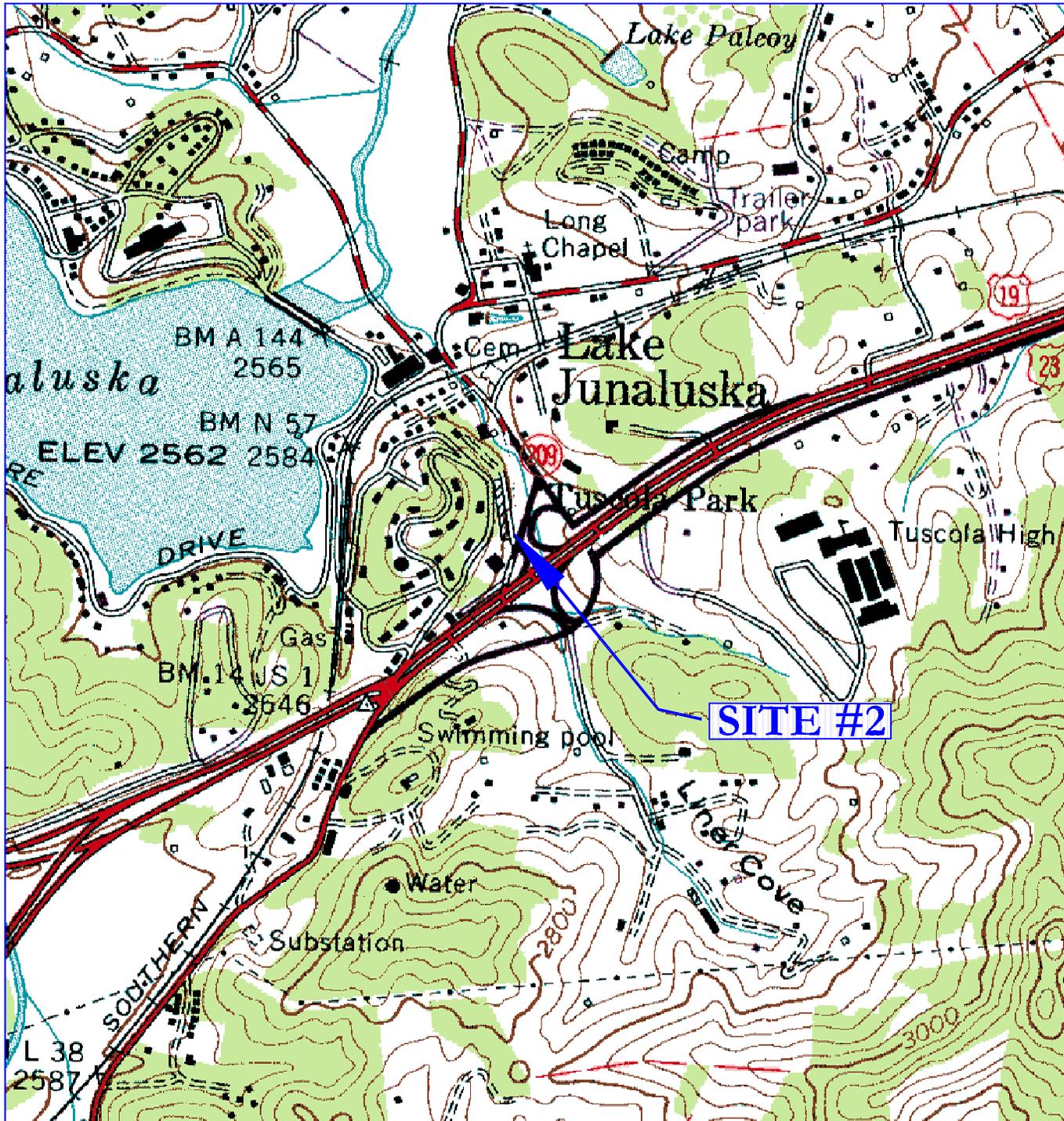
* = Reanalysis performed for DRO - sample was extracted past holding time.

Standards derived from the North Carolina UST Section Guidelines for Assessment and Corrective Action

Table 2
Groundwater Sampling Analytical Results - VOCs, SVOCs
David J. Sutton Property
Waynesville, Haywood Co., North Carolina

SAMPLE ID	SAMPLE DATE	VOCs EPA Method 601/602 (ug/L)					SVOCs EPA Method 625 (ug/L)	
		Benzene	Ethyl-benzene	Total Xylenes	Naphthalene	Toluene	2-Methyl-phenol	Naphthalene
Ground Water Gross Contamination		5,000	550,000	87,500	15,500	257,500	NS	15,500
Surface Water Quality Standards (15A NCAC 2B, Aquatic Life or EPA National Criteria) May 2007		NS	97	670	330	11	NS	330
Surface Water Quality Standards (15A NCAC 2B, Human Health or EPA National Criteria) May 2007		51	NS	NS	NS	NS	NS	NS
Ground water Protection Standards (2L), December 2006		1	550	530	21	1,000	14	21
S2-MW1	8/28/2009	21	210	1,030	45	1,400	6.0 J	<9.8
S2-MW2	8/28/2009	15	29	44	20	5.9	<9.8	11
SW-1	8/28/2009	BRL	BRL	BRL	BRL	BRL	BRL	BRL
NOTES: all units are in ug/L = micrograms per liter bgs = below ground surface BRL = below reporting limits VOCs = volatile organic compounds SVOCs = semi-volatile organic compounds								

FIGURES



7.5 Minute Quadrangle
 North Carolina, 1983
 Photorevised 1993

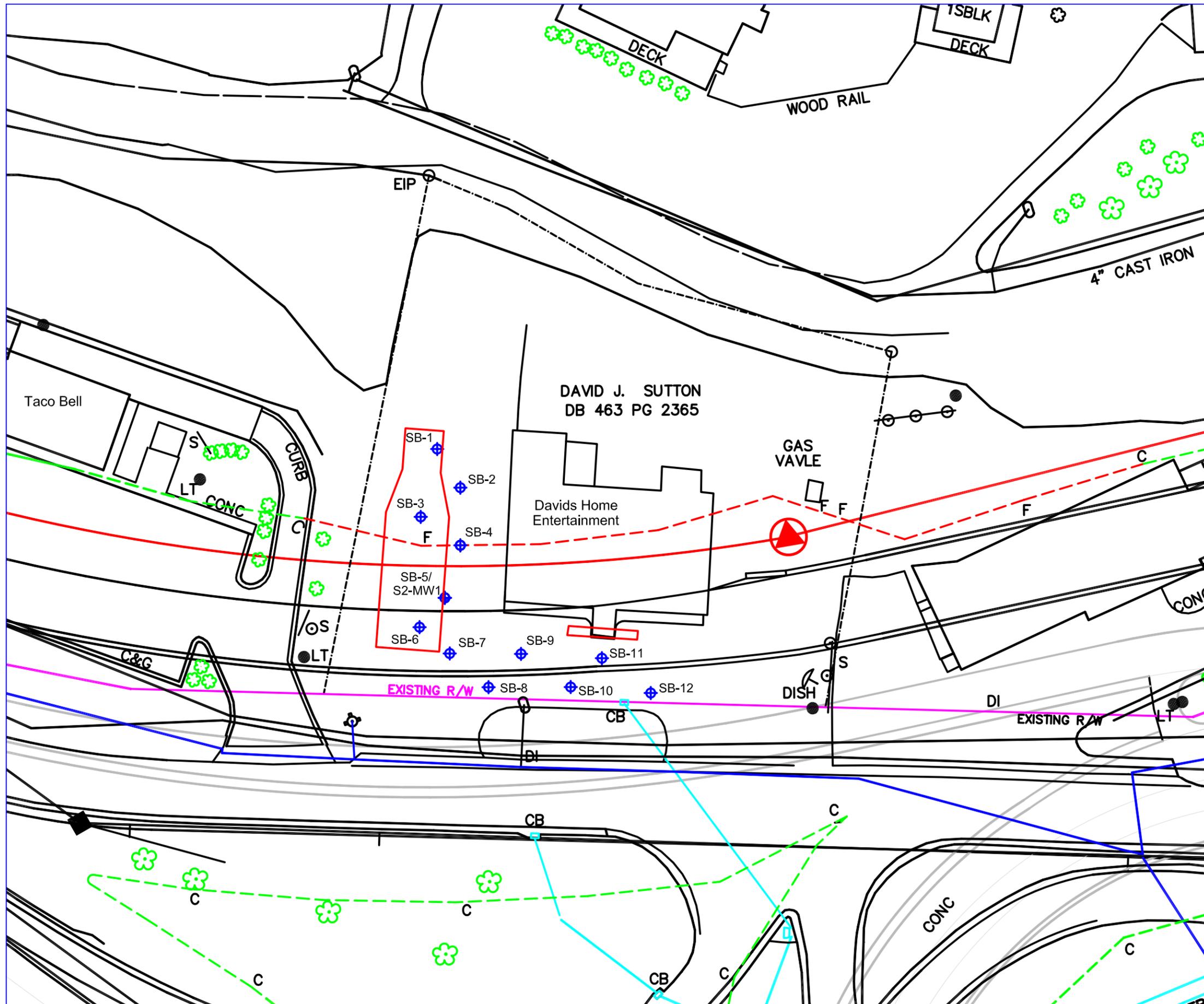
VICINITY MAP

Site #2, David J. Sutton Property
 100 Access Road
 Haywood County, NC

DRAWING NAME: J:\NCDOT\Haywood\FIG1	DATE: 9/29/09
SCALE: 1 INCH = 1,000 FEET	DR: TLH CHK: HPC REV:

PREPARED FOR:
 NC Department Of Transportation
 Geotechnical Unit
 WBS Element: 34599.1.1
 TIP# R-4047

Prepared By: amec 101 West Friendly Ave Suite 608 Greensboro, NC 27401 (336) 691-5398	Figure: Figure 1
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LEGEND

-  Proposed Right of Way
-  Existing Right of Way
-  Site Boundary Line
-  Cut Line
-  Fill Line
-  Approximate Location of Former UST Bed and Pump Island
-  Storm Water
-  City Water line
-  Soil Boring Location August 2009
-  Soil Boring and Temporary Monitoring Well Location August 2009

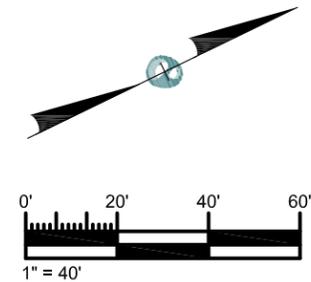
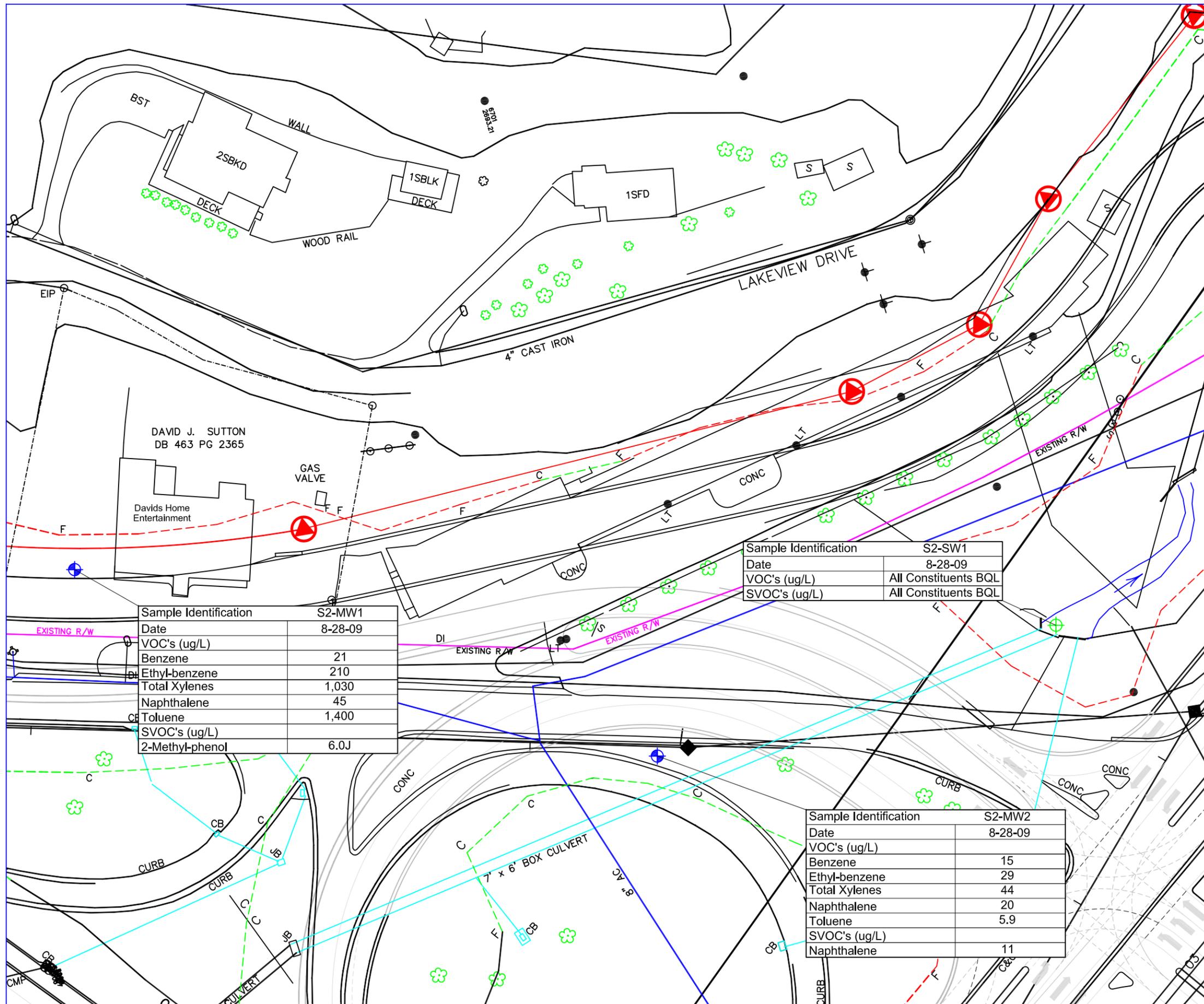


Figure 2
Site #2 David J. Sutton Property, Site Map

NC Department of Transportation
Geotechnical Unit
WBS Element: 34599.1.1
TIP# R-4047



LEGEND

-  Proposed Right of Way
-  Existing Right of Way
-  Site Boundary Line
-  Cut Line
-  Fill Line
-  Storm Water
-  City Water line
-  Soil Boring and Temporary Monitoring Well Location August 2009
-  Surface Water Sample Location August 2009

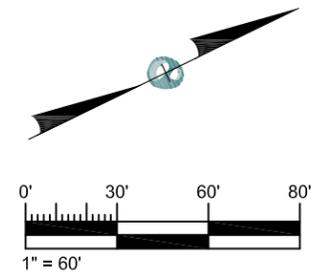
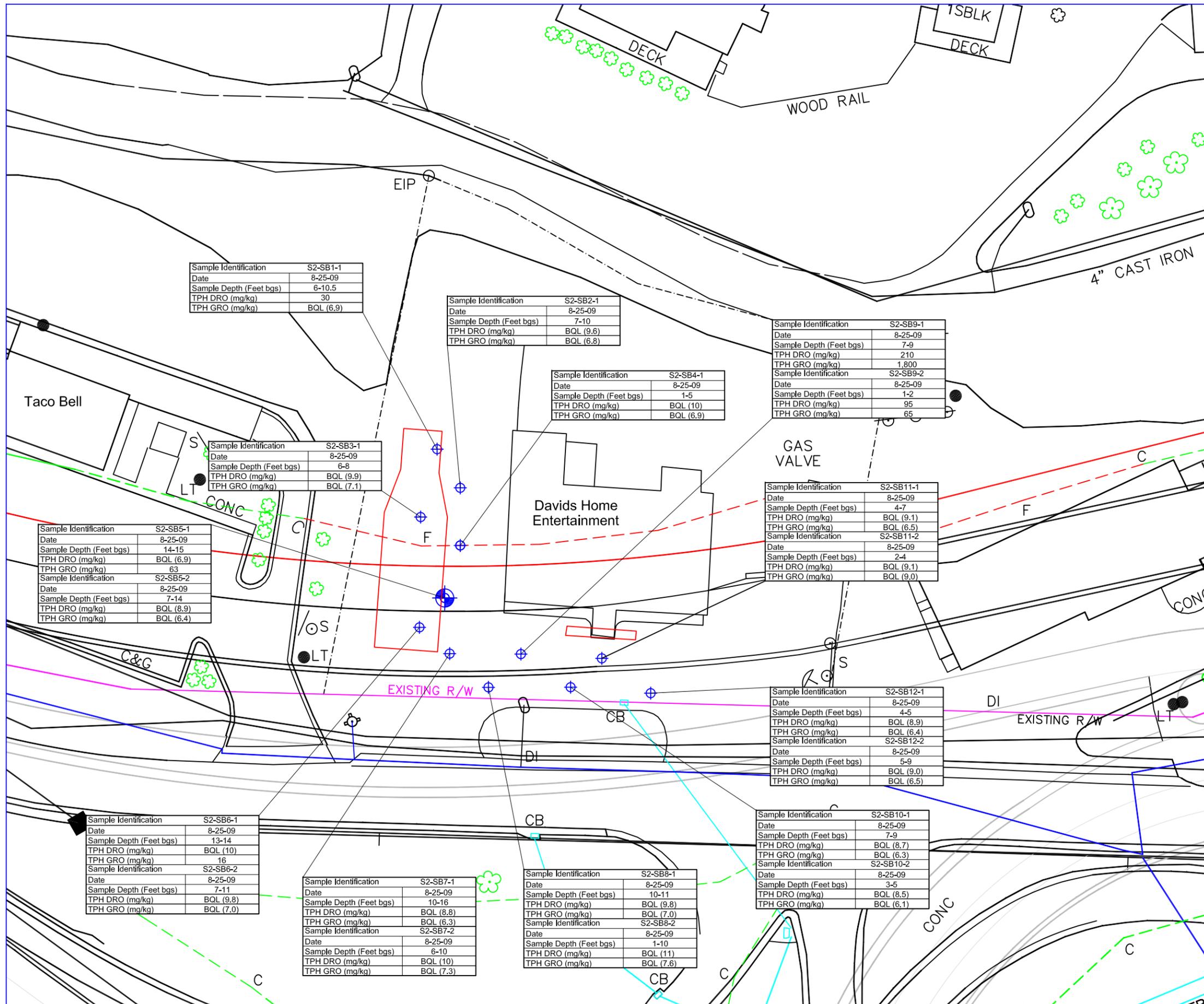


Figure 3
 Site #2 David J. Sutton Property
 Temporary Monitoring Well and
 Surface Water Sample Locations

NC Department of Transportation
 Geotechnical Unit
 WBS Element: 34599.1.1
 TIP# R-4047



LEGEND

- Proposed Right of Way
- Existing Right of Way
- Site Boundary Line
- Cut Line
- Fill Line
- Approximate Location of Former UST Bed and Pump Island
- Storm Water
- City Water line
- Soil Boring Location August 2009
- Soil Boring and Temporary Monitoring Well Location August 2009

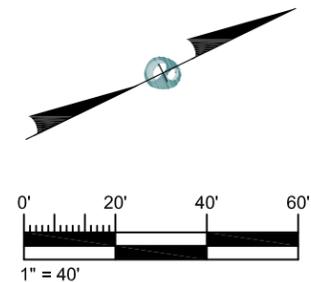
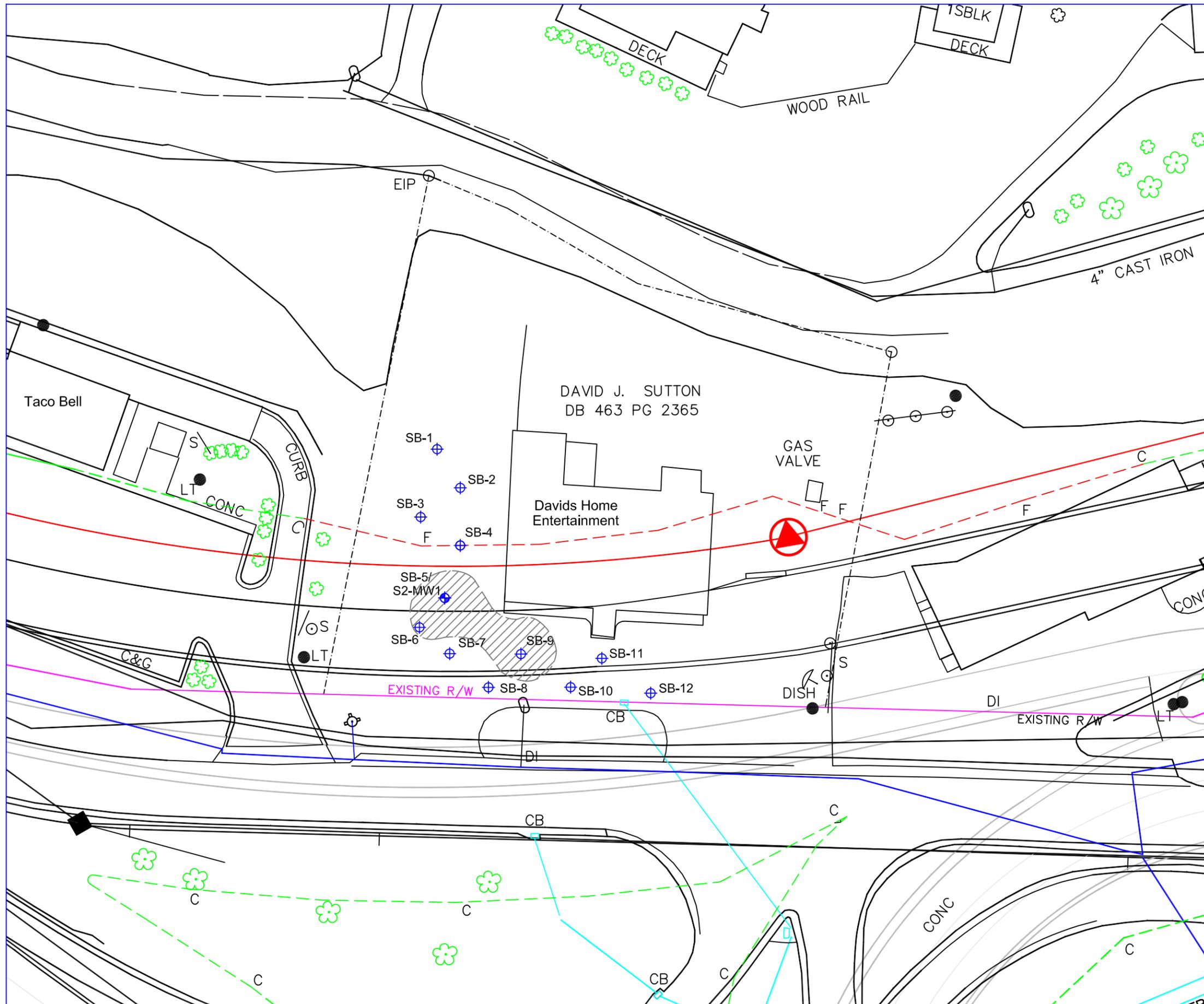


Figure 4
Site #2 David J. Sutton Property
Site Map With Soil Analytical Data

NC Department of Transportation
Geotechnical Unit
WBS Element: 34599.1.1
TIP# R-4047



LEGEND

-  Proposed Right of Way
-  Existing Right of Way
-  Site Boundary Line
-  Potential Area of Soil Contamination
-  Cut Line
-  Fill Line
-  Soil Boring Location August 2009
-  Temporary Monitoring Well Location August 2009



Figure 5
 Site #2 David J. Sutton Property
 Site Map With Potential Area Of
 Soil Contamination

NC Department of Transportation
 Geotechnical Unit
 WBS Element: 34599.1.1
 TIP# R-4047

APPENDIX 1

Photo Log

Photo Log

PAGE 1 of 2



Photo No. 1	Date: 08/5/09	
Direction Photo Taken: West		
Description: View of Site 2 in background and of Site 2 off site monitoring well location in foreground		

Photo No. 2	Date: 08/25/09	
Direction Photo Taken: Southwest		
Description: View of probing in Site 2 parking lot at south edge of former UST bed		

Photo Log



Photo No. 3	Date: 08/5/09	
Direction Photo Taken: West		
Description: View of Site 2 offsite monitoring well location		

Photo No. 4	Date: 08/5/09	
Direction Photo Taken: Southwest		
Description: View of Culvert where Site 2 off site surface water sample was collected		

APPENDIX 2

Boring and Well Construction Logs

Appendix 3

Laboratory Analytical Results



Case Narrative

Date: 09/11/09
Company: N. C. Department of Transportation
Contact: Helen Corley
Address: c/o AMEC Earth & Environmental, Inc.
101 W. Friendly Ave. Suite 603
Greensboro, NC 27401

Client Project ID: NCDOT: Haywood County
Prism COC Group No: G0809708
Collection Date(s): 08/25/09
Lab Submittal Date(s): 08/27/09
Client Project Name Or No: WBS #34599.1.1

This data package contains the analytical results for the project identified above and includes a Case Narrative, Laboratory Report and Quality Control Data totaling 24 pages. A chain-of-custody is also attached for the samples submitted to Prism for this project.

Data qualifiers are flagged individually on each sample. A key reference for the data qualifiers appears at the end of this case narrative. Quality control statements and/or sample specific remarks are included in the sample comments section of the laboratory report for each sample affected.

Semi Volatile Analysis

Sample 256232-1 was re-extracted for DRO on 9/10/09.

Volatile Analysis

No Anomalies Reported

Metals Analysis

N/A

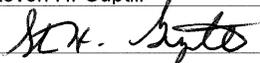
Wet Lab and Micro Analysis

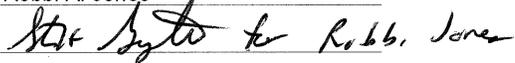
N/A

Please call if you have any questions relating to this analytical report.

Data Reviewed by: Steven H. Guptill

Project Manager: Robbi A. Jones

Signature: 

Signature: 

Review Date: 09/11/09

Approval Date: 09/11/09

Data Qualifiers Key Reference:

- B: Compound also detected in the method blank.
- #: Result outside of the QC limits.
- DO: Compound diluted out.
- E: Estimated concentration, calibration range exceeded.
- J: The analyte was positively identified but the value is estimated below the reporting limit.
- H: Estimated concentration with a high bias.
- L: Estimated concentration with a low bias.
- M: A matrix effect is present.

Notes: This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. The results in this report relate only to the samples submitted for analysis.



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

09/11/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County Client Sample ID: S2-S1-1 (6-10.5)
 Project No.: WBS #34599.1.1 Prism Sample ID: 256220
 Sample Matrix: Soil COC Group: G0809708
 Time Collected: 08/25/09 11:45
 Time Submitted: 08/27/09 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	72.6	%			1	SM2540 G	08/31/09 14:30	kpowers	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	30	mg/kg	9.6	1.6	1	8015B	09/04/09 0:40	pbarr	Q44301
Sample Preparation:			25.2 g	/	1 mL	3545	09/02/09 16:00	pbarr	P25490
						Surrogate	% Recovery	Control Limits	
						o-Terphenyl	89	49 - 124	
Sample Weight Determination									
Weight 1	5.86	g			1	GRO	08/31/09 0:00	lbrown	
Weight 2	6.34	g			1	GRO	08/31/09 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	BRL	mg/kg	6.9	4.3	50	8015B	09/02/09 18:24	grappaccioli	Q44245
						Surrogate	% Recovery	Control Limits	
						aaa-TFT	102	55 - 129	

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

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Laboratory Report

09/11/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County Client Sample ID: S2-S2-1 (7-10)
 Project No.: WBS #34599.1.1 Prism Sample ID: 256221
 Sample Matrix: Soil COC Group: G0809708
 Time Collected: 08/25/09 12:10
 Time Submitted: 08/27/09 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	73.2	%			1	SM2540 G	08/31/09 14:30	kpowers	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	9.6	1.5	1	8015B	09/03/09 21:07	pbarr	Q44301
Sample Preparation:			25.27 g	/	1 mL	3545	09/02/09 16:00	pbarr	P25490
						Surrogate	% Recovery	Control Limits	
						o-Terphenyl	53	49 - 124	
Sample Weight Determination									
Weight 1	6.34	g			1	GRO	08/31/09 0:00	lbrown	
Weight 2	5.86	g			1	GRO	08/31/09 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	BRL	mg/kg	6.8	4.3	50	8015B	09/02/09 18:57	grappaccioli	Q44245
						Surrogate	% Recovery	Control Limits	
						aaa-TFT	103	55 - 129	

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

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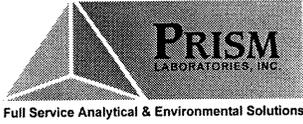
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Project ID: NCDOT: Haywood County Client Sample ID: S2-S3-1 (6-8)
 Project No.: WBS #34599.1.1 Prism Sample ID: 256222
 Sample Matrix: Soil COC Group: G0809708
 Time Collected: 08/25/09 13:55
 Time Submitted: 08/27/09 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	70.9	%			1	SM2540 G	08/31/09 14:30	kpowers	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	9.9	1.6	1	8015B	09/04/09 19:16	ivogel	Q44343
Sample Preparation:				25 g /	1 mL	3545	09/03/09 17:00	pbarr	P25500
						Surrogate	% Recovery	Control Limits	
						o-Terphenyl	68	49 - 124	
Sample Weight Determination									
Weight 1	6.06	g			1	GRO	08/31/09 0:00	lbrown	
Weight 2	5.63	g			1	GRO	08/31/09 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	BRL	mg/kg	7.1	4.4	50	8015B	09/02/09 19:29	grappaccioli	Q44245
						Surrogate	% Recovery	Control Limits	
						aaa-TFT	113	55 - 129	

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

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Project ID: NCDOT: Haywood County Client Sample ID: S2-S4-1 (1-5)
 Project No.: WBS #34599.1.1 Prism Sample ID: 256223
 Sample Matrix: Soil COC Group: G0809708
 Time Collected: 08/25/09 14:20
 Time Submitted: 08/27/09 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	70.2	%			1	SM2540 G	08/31/09 15:00	kpowers	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	10	1.6	1	8015B	09/04/09 19:16	jvogel	Q44343
Sample Preparation:				25 g /	1 mL	3545	09/03/09 17:00	pbarr	P25500
				Surrogate			% Recovery	Control Limits	
				o-Terphenyl			64	49 - 124	
Sample Weight Determination									
Weight 1	6.57	g			1	GRO	08/31/09 0:00	lbrown	
Weight 2	5.82	g			1	GRO	08/31/09 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	BRL	mg/kg	7.1	4.5	50	8015B	09/02/09 20:02	grappaccioli	Q44245
						Surrogate		% Recovery	Control Limits
						aaa-TFT		116	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

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Project ID: NCDOT: Haywood County Client Sample ID: S2-S5-1 (14-15)
 Project No.: WBS #34599.1.1 Prism Sample ID: 256224
 Sample Matrix: Soil COC Group: G0809708
 Time Collected: 08/25/09 15:00
 Time Submitted: 08/27/09 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	73.0	%			1	SM2540 G	08/31/09 15:00	kpowers	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	9.6	1.5	1	8015B	09/04/09 18:41	jvogel	Q44343
Sample Preparation:			25.1 g	/	1 mL	3545	09/03/09 17:00	pbarr	P25500
						Surrogate	% Recovery	Control Limits	
						o-Terphenyl	65	49 - 124	
Sample Weight Determination									
Weight 1	6.26	g			1	GRO	08/31/09 0:00	lbrown	
Weight 2	6.88	g			1	GRO	08/31/09 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	63	mg/kg	6.8	4.3	50	8015B	09/02/09 20:35	grappaccioli	Q44245
						Surrogate	% Recovery	Control Limits	
						aaa-TFT	104	55 - 129	

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

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Project ID: NCDOT: Haywood County Client Sample ID: S2-S5-2 (7-14)
 Project No.: WBS #34599.1.1 Prism Sample ID: 256225
 Sample Matrix: Soil COC Group: G0809708
 Time Collected: 08/25/09 15:10
 Time Submitted: 08/27/09 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Percent Solids Determination

Percent Solids	78.4	%			1	SM2540 G	08/31/09 15:00	kpowers	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	8.9	1.4	1	8015B	09/04/09 19:16	jvogel	Q44343
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Sample Preparation: 25.06 g / 1 mL 3545 09/03/09 17:00 pbarr P25500

Surrogate	% Recovery	Control Limits
o-Terphenyl	70	49 - 124

Sample Weight Determination

Weight 1	6.81	g			1	GRO	08/31/09 0:00	lbrown	
Weight 2	6.67	g			1	GRO	08/31/09 0:00	lbrown	

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	6.4	4.0	50	8015B	09/02/09 21:07	grappaccioli	Q44245
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Surrogate	% Recovery	Control Limits
aaa-TFT	118	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

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Project ID: NCDOT: Haywood County Client Sample ID: S2-S6-1 (13-14)
 Project No.: WBS #34599.1.1 Prism Sample ID: 256226
 Sample Matrix: Soil COC Group: G0809708
 Time Collected: 08/25/09 15:30
 Time Submitted: 08/27/09 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	69.4	%			1	SM2540 G	08/31/09 15:00	kpowers	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	10	1.6	1	8015B	09/05/09 3:31	jvogel	Q44343
Sample Preparation:			25.11 g	/	1 mL	3545	09/03/09 17:00	pbarr	P25500
			Surrogate				% Recovery	Control Limits	
			o-Terphenyl				71	49 - 124	
Sample Weight Determination									
Weight 1	6.46	g			1	GRO	08/31/09 0:00	lbrown	
Weight 2	6.67	g			1	GRO	08/31/09 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	16	mg/kg	7.2	4.5	50	8015B	09/02/09 21:39	grappaccioli	Q44245
			Surrogate				% Recovery	Control Limits	
			aaa-TFT				108	55 - 129	

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

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Project ID: NCDOT: Haywood County Client Sample ID: S2-S6-2 (7-11)
 Project No.: WBS #34599.1.1 Prism Sample ID: 256227
 Sample Matrix: Soil COC Group: G0809708
 Time Collected: 08/25/09 15:40
 Time Submitted: 08/27/09 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	71.4	%			1	SM2540 G	08/31/09 15:00	kpowers	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	9.8	1.6	1	8015B	09/04/09 19:51	jvogel	Q44343
Sample Preparation:				25 g	/	1 mL	3545	09/03/09 17:00	pbarr P25500
				Surrogate			% Recovery	Control Limits	
				o-Terphenyl			61	49 - 124	
Sample Weight Determination									
Weight 1	5.76	g			1	GRO	08/31/09 0:00	lbrown	
Weight 2	5.24	g			1	GRO	08/31/09 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	BRL	mg/kg	7.0	4.4	50	8015B	09/02/09 22:12	grappaccioli	Q44245
						Surrogate		% Recovery	Control Limits
						aaa-TFT		117	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

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Project ID: NCDOT: Haywood County Client Sample ID: S2-S7-1 (10-16)
 Project No.: WBS #34599.1.1 Prism Sample ID: 256228
 Sample Matrix: Soil COC Group: G0809708
 Time Collected: 08/25/09 16:00
 Time Submitted: 08/27/09 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
<u>Percent Solids Determination</u>									
Percent Solids	79.0	%			1	SM2540 G	08/31/09 15:00	kpowers	
<u>Diesel Range Organics (DRO) by GC-FID</u>									
Diesel Range Organics (DRO)	BRL	mg/kg	8.8	1.4	1	8015B	09/04/09 20:27	ivogel	Q44343
Sample Preparation:			25.09 g	/	1 mL	3545	09/03/09 17:00	pbarr	P25500
					Surrogate		% Recovery	Control Limits	
					o-Terphenyl		74	49 - 124	
<u>Sample Weight Determination</u>									
Weight 1	6.12	g			1	GRO	08/31/09 0:00	lbrown	
Weight 2	6.44	g			1	GRO	08/31/09 0:00	lbrown	
<u>Gasoline Range Organics (GRO) by GC-FID</u>									
Gasoline Range Organics (GRO)	BRL	mg/kg	6.3	4.0	50	8015B	09/02/09 22:44	grappaccioli	Q44245
					Surrogate		% Recovery	Control Limits	
					aaa-TFT		111	55 - 129	

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

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Project ID: NCDOT: Haywood County Client Sample ID: S2-S7-2 (6-10)
 Project No.: WBS #34599.1.1 Prism Sample ID: 256229
 Sample Matrix: Soil COC Group: G0809708
 Time Collected: 08/25/09 16:10
 Time Submitted: 08/27/09 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Percent Solids Determination

Percent Solids	68.2	%			1	SM2540 G	08/31/09 15:00	kpowers	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	10	1.7	1	8015B	09/05/09 4:42	jvogel	Q44343
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Sample Preparation: 25 g / 1 mL 3545 09/03/09 17:00 pbarr P25500

Surrogate	% Recovery	Control Limits
o-Terphenyl	68	49 - 124

Sample Weight Determination

Weight 1	6.95	g			1	GRO	08/31/09 0:00	lbrown	
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Weight 2	6.67	g			1	GRO	08/31/09 0:00	lbrown	
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Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	7.3	4.6	50	8015B	09/02/09 23:16	grappaccioli	Q44245
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Surrogate	% Recovery	Control Limits
aaa-TFT	117	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

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Project ID: NCDOT: Haywood County Client Sample ID: S2-S8-10 (10-11)
 Project No.: WBS #34599.1.1 Prism Sample ID: 256230
 Sample Matrix: Soil COC Group: G0809708
 Time Collected: 08/25/09 16:20
 Time Submitted: 08/27/09 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Percent Solids Determination

Percent Solids	71.1	%			1	SM2540 G	08/31/09 15:00	kpowers	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	9.8	1.6	1	8015B	09/04/09 21:02	jvogel	Q44343
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Sample Preparation: 25 g / 1 mL 3545 09/03/09 17:00 pbarr P25500

Surrogate	% Recovery	Control Limits
o-Terphenyl	62	49 - 124

Sample Weight Determination

Weight 1	6.20	g			1	GRO	08/31/09 0:00	lbrown	
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Weight 2	6.77	g			1	GRO	08/31/09 0:00	lbrown	
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Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	7.0	4.4	50	8015B	09/03/09 0:53	grappaccioli	Q44245
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Surrogate	% Recovery	Control Limits
aaa-TFT	114	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

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All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

09/11/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County Client Sample ID: S2-S8-2 (1-10)
 Project No.: WBS #34599.1.1 Prism Sample ID: 256231
 Sample Matrix: Soil COC Group: G0809708
 Time Collected: 08/25/09 16:30
 Time Submitted: 08/27/09 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Percent Solids Determination

Percent Solids	65.4	%			1	SM2540 G	08/31/09 15:00	kpowers	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	11	1.7	1	8015B	09/04/09 21:37	jvogel	Q44343
-----------------------------	-----	-------	----	-----	---	-------	----------------	--------	--------

Sample Preparation: 25.16 g / 1 mL 3545 09/03/09 17:00 pbarr P25500

Surrogate	% Recovery	Control Limits
o-Terphenyl	58	49 - 124

Sample Weight Determination

Weight 1	6.85	g			1	GRO	08/31/09 0:00	lbrown	
----------	------	---	--	--	---	-----	---------------	--------	--

Weight 2	6.63	g			1	GRO	08/31/09 0:00	lbrown	
----------	------	---	--	--	---	-----	---------------	--------	--

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	7.6	4.8	50	8015B	09/03/09 1:26	grappaccioli	Q44245
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Surrogate	% Recovery	Control Limits
aaa-TFT	117	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

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Laboratory Report

09/11/09

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 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County Client Sample ID: S2-S9-1 (7-9)
 Project No.: WBS #34599.1.1 Prism Sample ID: 256232
 Sample Matrix: Soil COC Group: G0809708
 Time Collected: 08/25/09 16:50
 Time Submitted: 08/27/09 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	77.2	%			1	SM2540 G	08/31/09 15:00	kpowers	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	9.1	1.5	1	8015B	09/04/09 23:58	jvogel	Q44343
Sample Preparation:				25 g /	1 mL	3545	09/03/09 17:00	pbarr	P25500
						Surrogate	% Recovery	Control Limits	
						o-Terphenyl	64	49 - 124	
Sample Weight Determination									
Weight 1	6.01	g			1	GRO	08/31/09 0:00	lbrown	
Weight 2	6.32	g			1	GRO	08/31/09 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	1800	mg/kg	65	41	500	8015B	09/03/09 13:32	grappaccioli	Q44245
						Surrogate	% Recovery	Control Limits	
						aaa-TFT	DO #	55 - 129	

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

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All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

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Laboratory Report

09/11/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County
 Project No.: WBS #34599.1.1
 Sample Matrix: Soil

Client Sample ID: S2-S9-1 (7-9) Aliquot
 for DRO Reanalysis
 Prism Sample ID: 256232-1
 COC Group: G0809708
 Time Collected: 08/25/09 16:50
 Time Submitted: 08/27/09 13:00
 Aliquoted Sampl 256232

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID	
Diesel Range Organics (DRO) by GC-FID										
Diesel Range Organics (DRO)	210	mg/kg	7.0	1.1	5	8015B	09/11/09 11:53	jvogel	Q44465	
Sample was extracted past holding time.										
Sample Preparation:				25 g	/	1 mL	3545	09/10/09 16:00	aguptill	P25546
							Surrogate	% Recovery	Control Limits	
							o-Terphenyl	60	49 - 124	

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

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All results are reported on a wet-weight basis

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

09/11/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County Client Sample ID: S2-S9-2 (1-2)
 Project No.: WBS #34599.1.1 Prism Sample ID: 256233
 Sample Matrix: Soil COC Group: G0809708
 Time Collected: 08/25/09 17:00
 Time Submitted: 08/27/09 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	81.0	%			1	SM2540 G	08/31/09 15:00	kpowers	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	95	mg/kg	8.6	1.4	1	8015B	09/05/09 1:10	jvogel	Q44343
Sample Preparation:				25 g	/	1 mL	3545	09/03/09 17:00	pbarr P25500
				Surrogate			% Recovery	Control Limits	
				o-Terphenyl			68	49 - 124	
Sample Weight Determination									
Weight 1	6.74	g			1	GRO	08/31/09 0:00	lbrown	
Weight 2	8.10	g			1	GRO	08/31/09 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	65	mg/kg	6.2	3.9	50	8015B	09/03/09 2:30	grappaccioli	Q44245
						Surrogate		% Recovery	Control Limits
						aaa-TFT		100	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

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Laboratory Report

09/11/09

N. C. Department of Transportation
 Attn: Helen Corley
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Project ID: NCDOT: Haywood County Client Sample ID: S2-S10-1 (7-9)
 Project No.: WBS #34599.1.1 Prism Sample ID: 256234
 Sample Matrix: Soil COC Group: G0809708
 Time Collected: 08/25/09 17:20
 Time Submitted: 08/27/09 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	80.0	%			1	SM2540 G	08/31/09 15:00	kpowers	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	8.7	1.4	1	8015B	09/04/09 22:48	jvogel	Q44343
Sample Preparation:			25.05 g	/	1 mL	3545	09/03/09 17:00	pbarr	P25500
					Surrogate		% Recovery	Control Limits	
					o-Terphenyl		68	49 - 124	
Sample Weight Determination									
Weight 1	6.08	g			1	GRO	08/31/09 0:00	lbrown	
Weight 2	6.40	g			1	GRO	08/31/09 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	BRL	mg/kg	6.3	3.9	50	8015B	09/03/09 3:02	grappaccioli	Q44245
					Surrogate		% Recovery	Control Limits	
					aaa-TFT		116	55 - 129	

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

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Project ID: NCDOT: Haywood County Client Sample ID: S2-S10-2 (3-5)
 Project No.: WBS #34599.1.1 Prism Sample ID: 256235
 Sample Matrix: Soil COC Group: G0809708
 Time Collected: 08/25/09 17:30
 Time Submitted: 08/27/09 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	82.1	%			1	SM2540 G	08/31/09 15:00	kpowers	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	8.5	1.4	1	8015B	09/04/09 23:23	jvogel	Q44343
Sample Preparation:			25.02 g	/	1 mL	3545	09/03/09 17:00	pbarr	P25500
					Surrogate		% Recovery	Control Limits	
					o-Terphenyl		71	49 - 124	
Sample Weight Determination									
Weight 1	6.84	g			1	GRO	08/31/09 0:00	lbrown	
Weight 2	6.31	g			1	GRO	08/31/09 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	BRL	mg/kg	6.1	3.8	50	8015B	09/03/09 3:35	grappaccioli	Q44245
					Surrogate		% Recovery	Control Limits	
					aaa-TFT		116	55 - 129	

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

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09/11/09

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Project ID: NCDOT: Haywood County Client Sample ID: S2-S11-1 (4-7)
 Project No.: WBS #34599.1.1 Prism Sample ID: 256236
 Sample Matrix: Soil COC Group: G0809708
 Time Collected: 08/25/09 18:00
 Time Submitted: 08/27/09 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	76.6	%			1	SM2540 G	08/31/09 15:00	kpowers	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	9.1	1.5	1	8015B	09/05/09 2:20	jvogel	Q44343
Sample Preparation:				25 g /	1 mL	3545	09/03/09 17:00	pbarr	P25500
						Surrogate	% Recovery	Control Limits	
						o-Terphenyl	56	49 - 124	
Sample Weight Determination									
Weight 1	6.64	g			1	GRO	08/31/09 0:00	lbrown	
Weight 2	6.87	g			1	GRO	08/31/09 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	BRL	mg/kg	6.5	4.1	50	8015B	09/03/09 4:07	grappaccioli	Q44245
						Surrogate	% Recovery	Control Limits	
						aaa-TFT	92	55 - 129	

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

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Laboratory Report

09/11/09

N. C. Department of Transportation
 Attn: Helen Corley
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Project ID: NCDOT: Haywood County Client Sample ID: S2-S11-2 (2-4)
 Project No.: WBS #34599.1.1 Prism Sample ID: 256237
 Sample Matrix: Soil COC Group: G0809708
 Time Collected: 08/25/09 18:10
 Time Submitted: 08/27/09 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	77.7	%			1	SM2540 G	08/31/09 15:00	kpowers	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	9.0	1.4	1	8015B	09/05/09 5:17	jvogel	Q44343
Sample Preparation:			25.11 g	/	1 mL	3545	09/03/09 17:00	pbarr	P25500
					Surrogate		% Recovery	Control Limits	
					o-Terphenyl		64	49 - 124	
Sample Weight Determination									
Weight 1	6.74	g			1	GRO	08/31/09 0:00	lbrown	
Weight 2	6.76	g			1	GRO	08/31/09 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	BRL	mg/kg	6.4	4.0	50	8015B	09/07/09 15:12	grappaccioli	Q44324
					Surrogate		% Recovery	Control Limits	
					aaa-TFT		83	55 - 129	

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

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Laboratory Report

09/11/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County Client Sample ID: S2-S12-1 (4-5)
 Project No.: WBS #34599.1.1 Prism Sample ID: 256238
 Sample Matrix: Soil COC Group: G0809708
 Time Collected: 08/25/09 18:25
 Time Submitted: 08/27/09 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	78.4	%			1	SM2540 G	08/31/09 15:00	kpowers	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	8.9	1.4	1	8015B	09/05/09 1:45	jvogel	Q44343
Sample Preparation:				25 g	/	1 mL	3545	09/03/09 17:00	pbarr P25500
				Surrogate			% Recovery	Control Limits	
				o-Terphenyl			59	49 - 124	
Sample Weight Determination									
Weight 1	6.63	g			1	GRO	08/31/09 0:00	lbrown	
Weight 2	6.58	g			1	GRO	08/31/09 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	BRL	mg/kg	6.4	4.0	50	8015B	09/07/09 15:44	grappaccioli	Q44324
						Surrogate		% Recovery	Control Limits
						aaa-TFT		88	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

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Angela D. Overcash, V.P. Laboratory Services

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Laboratory Report

09/11/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County Client Sample ID: S2-S12-2 (5-9)
 Project No.: WBS #34599.1.1 Prism Sample ID: 256239
 Sample Matrix: Soil COC Group: G0809708
 Time Collected: 08/25/09 18:30
 Time Submitted: 08/27/09 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	77.5	%			1	SM2540 G	08/31/09 15:00	kpowers	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	9.0	1.5	1	8015B	09/04/09 22:12	lvogel	Q44343
Sample Preparation:				25 g /	1 mL	3545	09/03/09 17:00	pbarr	P25500
				Surrogate			% Recovery	Control Limits	
				o-Terphenyl			75	49 - 124	
Sample Weight Determination									
Weight 1	6.32	g			1	GRO	08/31/09 0:00	lbrown	
Weight 2	7.21	g			1	GRO	08/31/09 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	BRL	mg/kg	6.5	4.0	50	8015B	09/07/09 16:17	grappaccioli	Q44324
						Surrogate		% Recovery	Control Limits
						aaa-TFT		85	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

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All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

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NC Certification No. 402
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Level II QC Report

09/11/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County
 Project No.: WBS #34599.1.1

COC Group Number: G0809708
 Date/Time Submitted: 08/27/09 13:00

Gasoline Range Organics (GRO) by GC-FID, method 8015B

Method Blank					QC Batch ID
	Result	RL	Control Limit	Units	

Gasoline Range Organics (GRO)	ND	5	<2.5	mg/kg	Q44245
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Laboratory Control Sample					QC Batch ID
	Result	Spike Amount	Units	Recovery %	Recovery Ranges %

Gasoline Range Organics (GRO)	47.95	50	mg/kg	96	67-116
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Matrix Spike					QC Batch ID
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %

256220 Gasoline Range Organics (GRO)	52.75	50	mg/kg	106	57-113
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Matrix Spike Duplicate					QC Batch ID		
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %

256220 Gasoline Range Organics (GRO)	53.45	50	mg/kg	107	57-113	1	0 - 23
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Diesel Range Organics (DRO) by GC-FID, method 8015B

Method Blank					QC Batch ID
	Result	RL	Control Limit	Units	

Diesel Range Organics (DRO)	ND	7	<3.5	mg/kg	Q44301
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Laboratory Control Sample					QC Batch ID
	Result	Spike Amount	Units	Recovery %	Recovery Ranges %

Diesel Range Organics (DRO)	81.9	80	mg/kg	102	55-109
-----------------------------	------	----	-------	-----	--------

Matrix Spike					QC Batch ID
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %

256492 Diesel Range Organics (DRO)	64.6	80	mg/kg	81	50-117
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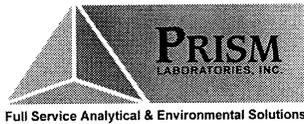
Matrix Spike Duplicate					QC Batch ID		
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %

256492 Diesel Range Organics (DRO)	62.2	80	mg/kg	78	50-117	4	0 - 24
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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Level II QC Report

09/11/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County
 Project No.: WBS #34599.1.1

COC Group Number: G0809708
 Date/Time Submitted: 08/27/09 13:00

Gasoline Range Organics (GRO) by GC-FID, method 8015B

Method Blank							QC Batch ID		
	Result	RL	Control Limit	Units					
Gasoline Range Organics (GRO)	ND	5	<2.5	mg/kg			Q44324		
Laboratory Control Sample							QC Batch ID		
	Result	Spike Amount		Units	Recovery %	Recovery Ranges %			
Gasoline Range Organics (GRO)	51.75	50		mg/kg	104	67-116	Q44324		
Matrix Spike							QC Batch ID		
Sample ID:	Result	Spike Amount		Units	Recovery %	Recovery Ranges %			
256237 Gasoline Range Organics (GRO)	38.2	50		mg/kg	76	57-113	Q44324		
Matrix Spike Duplicate							QC Batch ID		
Sample ID:	Result	Spike Amount		Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	
256237 Gasoline Range Organics (GRO)	37.6	50		mg/kg	75	57-113	2	0 - 23	Q44324

Diesel Range Organics (DRO) by GC-FID, method 8015B

Method Blank							QC Batch ID		
	Result	RL	Control Limit	Units					
Diesel Range Organics (DRO)	ND	7	<3.5	mg/kg			Q44343		
Laboratory Control Sample							QC Batch ID		
	Result	Spike Amount		Units	Recovery %	Recovery Ranges %			
Diesel Range Organics (DRO)	72.4	80		mg/kg	91	55-109	Q44343		
Matrix Spike							QC Batch ID		
Sample ID:	Result	Spike Amount		Units	Recovery %	Recovery Ranges %			
256235 Diesel Range Organics (DRO)	70.3	80		mg/kg	88	50-117	Q44343		
Matrix Spike Duplicate							QC Batch ID		
Sample ID:	Result	Spike Amount		Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	
256235 Diesel Range Organics (DRO)	75.3	80		mg/kg	94	50-117	7	0 - 24	Q44343

Diesel Range Organics (DRO) by GC-FID, method 8015B

Method Blank							QC Batch ID
	Result	RL	Control Limit	Units			
Diesel Range Organics (DRO)	ND	7	<3.5	mg/kg			Q44465
Laboratory Control Sample							QC Batch ID
	Result	Spike Amount		Units	Recovery %	Recovery Ranges %	
Diesel Range Organics (DRO)	70.9	80		mg/kg	89	55-109	Q44465

#-See Case Narrative

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Full-Service Analytical & Environmental Solutions

449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543
Phone: 704/529-6364 • Fax: 704/525-0409

Client Company Name: AMEC

Report To/Contact Name: Helen Corley

Reporting Address: 101 W. Friendly Ave Ste 603

Colesburg NC 27401

Phone: 336-691-5398 Fax (Yes) (No):

Email (Yes) (No) Email Address:

EDD Type: PDF Excel Other

Site Location Name: Haywood County

Site Location Physical Address: Site #2

CHAIN OF CUSTODY RECORD

PAGE 2 OF 2 QUOTE # TO ENSURE PROPER BILLING: W05 34599114

Project Name: Haywood County PSAs

Short Hold Analysis: (Yes) (No) UST Project: (Yes) (No) III III IV

*Please ATTACH any project specific reporting (QC LEVEL I III III IV)

provisions and/or QC Requirements

Invoice To: Chris Peoples

Address: NC DOT 1592 Mail Center

Raleigh NC 27699

Purchase Order No./Billing Reference: 34599.11

Requested Due Date 1 Day 2 Days 3 Days 4 Days 5 Days

"Working Days" 6-9 Days Standard 10 days Rush Work Must Be

Samples received after 15:00 will be processed next business day.

Turnaround time is based on business days, excluding weekends and holidays.

(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES

RENDERED BY PRISM LABORATORIES, INC. TO CLIENT)

LAB USE ONLY

Samples INTACT upon arrival? YES NO N/A
Received ON WET ICE? Temp 3.6
PROPER PRESERVATIVES indicated?
Received WITHIN HOLDING TIMES?
CUSTODY SEALS INTACT?
VOLATILES rec'd W/OUT HEADSPACE?
PROPER CONTAINERS used?

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL

Certification: NELAC USACE FL NC

SC OTHER N/A

Water Chlorinated: YES NO

Sample Iced Upon Collection: YES NO

ANALYSES REQUESTED

DRD

603

PRISM

LAB

ID NO.

REMARKS



Case Narrative (Revised)

Date: 09/14/09
Company: N. C. Department of Transportation
Contact: Helen Corley
Address: c/o AMEC Earth & Environmental, Inc.
101 W. Friendly Ave. Suite 603
Greensboro, NC 27401

Client Project ID: NCDOT: Haywood County
Prism COC Group No: G0809749
Collection Date(s): 08/28/09
Lab Submittal Date(s): 08/28/09
Client Project Name Or No: WBS #34599.1.1

This is a revised report and supersedes our original laboratory report dated 9/12/09. Sample ID for S2-MW-2 was corrected.

This data package contains the analytical results for the project identified above and includes a Case Narrative, Laboratory Report and Quality Control Data totaling 35 pages. A chain-of-custody is also attached for the samples submitted to Prism for this project.

Data qualifiers are flagged individually on each sample. A key reference for the data qualifiers appears at the end of this case narrative. Quality control statements and/or sample specific remarks are included in the sample comments section of the laboratory report for each sample affected.

Semi Volatile Analysis

Analysis Note for Q44380 LCS Di-n-octylphthalate: LCS recovery outside the control limits. This compound was not detected in samples associated with this batch. No further action was taken.

Analysis Note for Q44380 LCS Pyrene: LCS recovery outside the control limits. This compound was not detected in samples associated with this batch. No further action was taken.

Analysis Note for Q44380 MSD Dimethylphthalate: MSD recovery outside the control limits.

Volatile Analysis

No Anomalies Reported

Metals Analysis

N/A

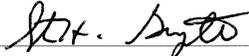
Wet Lab and Micro Analysis

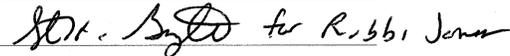
N/A

Please call if you have any questions relating to this analytical report.

Data Reviewed by: Steven H. Guptill

Project Manager: Robbi A. Jones

Signature: 

Signature: 

Review Date: 09/14/09

Approval Date: 09/14/09

Data Qualifiers Key Reference:

B: Compound also detected in the method blank.

#: Result outside of the QC limits.

DO: Compound diluted out.

E: Estimated concentration, calibration range exceeded.

J: The analyte was positively identified but the value is estimated below the reporting limit.

H: Estimated concentration with a high bias.

L: Estimated concentration with a low bias.

M: A matrix effect is present.

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 NC Drinking Water Cert. No. 37735

Laboratory Report

09/14/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County Client Sample ID: S1-MW1
 Project No.: WBS #34599.1.1 Prism Sample ID: 256469
 Sample Matrix: Water COC Group: G0809749
 Time Collected: 08/28/09 8:30
 Time Submitted: 08/28/09 14:02

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Purgeable Halocarbons and Aromatics by GC-PID/ELCD									
1,1,1-Trichloroethane	BRL	µg/L	1.0	0.21	1	601/602	09/08/09 16:11	erussell	Q44354
1,1,2,2-Tetrachloroethane	BRL	µg/L	1.0	0.21	1	601/602	09/08/09 16:11	erussell	Q44354
1,1,2-Trichloroethane	BRL	µg/L	1.0	0.13	1	601/602	09/08/09 16:11	erussell	Q44354
1,1-Dichloroethane	BRL	µg/L	1.0	0.14	1	601/602	09/08/09 16:11	erussell	Q44354
1,1-Dichloroethene	BRL	µg/L	1.0	0.19	1	601/602	09/08/09 16:11	erussell	Q44354
1,2-Dibromoethane (EDB)	BRL	µg/L	1.0	0.12	1	601/602	09/08/09 16:11	erussell	Q44354
1,2-Dichlorobenzene	BRL	µg/L	1.0	0.096	1	601/602	09/08/09 16:11	erussell	Q44354
1,2-Dichloroethane	BRL	µg/L	1.0	0.16	1	601/602	09/08/09 16:11	erussell	Q44354
1,2-Dichloropropane	BRL	µg/L	1.0	0.16	1	601/602	09/08/09 16:11	erussell	Q44354
1,3-Dichlorobenzene	BRL	µg/L	1.0	0.17	1	601/602	09/08/09 16:11	erussell	Q44354
1,4-Dichlorobenzene	BRL	µg/L	1.0	0.12	1	601/602	09/08/09 16:11	erussell	Q44354
Benzene	BRL	µg/L	0.50	0.19	1	601/602	09/08/09 16:11	erussell	Q44354
Bromodichloromethane	BRL	µg/L	1.0	0.11	1	601/602	09/08/09 16:11	erussell	Q44354
Bromoform	BRL	µg/L	1.0	0.094	1	601/602	09/08/09 16:11	erussell	Q44354
Bromomethane	BRL	µg/L	5.0	0.087	1	601/602	09/08/09 16:11	erussell	Q44354
Carbon tetrachloride	BRL	µg/L	1.0	0.23	1	601/602	09/08/09 16:11	erussell	Q44354
Chlorobenzene	BRL	µg/L	1.0	0.37	1	601/602	09/08/09 16:11	erussell	Q44354
Chloroethane	BRL	µg/L	5.0	0.25	1	601/602	09/08/09 16:11	erussell	Q44354
Chloroform	BRL	µg/L	1.0	0.18	1	601/602	09/08/09 16:11	erussell	Q44354
Chloromethane	BRL	µg/L	5.0	0.24	1	601/602	09/08/09 16:11	erussell	Q44354
cis-1,2-Dichloroethene	BRL	µg/L	1.0	0.51	1	601/602	09/08/09 16:11	erussell	Q44354
cis-1,3-Dichloropropene	BRL	µg/L	1.0	0.16	1	601/602	09/08/09 16:11	erussell	Q44354
Dibromochloromethane	BRL	µg/L	1.0	0.12	1	601/602	09/08/09 16:11	erussell	Q44354
Dichlorodifluoromethane	BRL	µg/L	5.0	0.21	1	601/602	09/08/09 16:11	erussell	Q44354
Ethylbenzene	BRL	µg/L	1.0	0.28	1	601/602	09/08/09 16:11	erussell	Q44354
Isopropyl ether (IPE)	BRL	µg/L	5.0	0.18	1	601/602	09/08/09 16:11	erussell	Q44354
m,p-Xylenes	BRL	µg/L	2.0	0.51	1	601/602	09/08/09 16:11	erussell	Q44354

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

09/14/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County Client Sample ID: S1-MW1
 Project No.: WBS #34599.1.1 Prism Sample ID: 256469
 Sample Matrix: Water COC Group: G0809749
 Time Collected: 08/28/09 8:30
 Time Submitted: 08/28/09 14:02

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Methyl t-butyl ether (MTBE)	BRL	µg/L	5.0	0.17	1	601/602	09/08/09 16:11	erussell	Q44354
Methylene Chloride	BRL	µg/L	1.0	0.12	1	601/602	09/08/09 16:11	erussell	Q44354
Naphthalene	BRL	µg/L	1.0	0.63	1	601/602	09/08/09 16:11	erussell	Q44354
o-Xylene	BRL	µg/L	1.0	0.31	1	601/602	09/08/09 16:11	erussell	Q44354
Tetrachloroethene	BRL	µg/L	1.0	0.26	1	601/602	09/08/09 16:11	erussell	Q44354
Toluene	BRL	µg/L	1.0	0.23	1	601/602	09/08/09 16:11	erussell	Q44354
trans-1,2-Dichloroethene	BRL	µg/L	1.0	0.17	1	601/602	09/08/09 16:11	erussell	Q44354
trans-1,3-Dichloropropene	BRL	µg/L	1.0	0.19	1	601/602	09/08/09 16:11	erussell	Q44354
Trichloroethene	BRL	µg/L	1.0	0.21	1	601/602	09/08/09 16:11	erussell	Q44354
Trichlorofluoromethane	BRL	µg/L	5.0	0.24	1	601/602	09/08/09 16:11	erussell	Q44354
Vinyl chloride	BRL	µg/L	1.0	0.33	1	601/602	09/08/09 16:11	erussell	Q44354

Surrogate	% Recovery	Control Limits
Bromochlorobenzene-ELCD	97	56 - 148
1,4-Difluorobenzene-PID	104	69 - 140

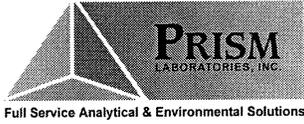
Semivolatile Organic Compounds by GC/MS

1,2,4-Trichlorobenzene	BRL	µg/L	9.8	1.7	1	625	09/09/09 10:31	rselph	Q44380
1,2-Dichlorobenzene	BRL	µg/L	9.8	1.9	1	625	09/09/09 10:31	rselph	Q44380
1,3-Dichlorobenzene	BRL	µg/L	9.8	2.0	1	625	09/09/09 10:31	rselph	Q44380
1,4-Dichlorobenzene	BRL	µg/L	9.8	1.8	1	625	09/09/09 10:31	rselph	Q44380
2,4,5-Trichlorophenol	BRL	µg/L	9.8	2.6	1	625	09/09/09 10:31	rselph	Q44380
2,4,6-Trichlorophenol	BRL	µg/L	9.8	3.1	1	625	09/09/09 10:31	rselph	Q44380
2,4-Dichlorophenol	BRL	µg/L	9.8	1.5	1	625	09/09/09 10:31	rselph	Q44380
2,4-Dimethylphenol	BRL	µg/L	9.8	2.4	1	625	09/09/09 10:31	rselph	Q44380
2,4-Dinitrophenol	BRL	µg/L	49	1.1	1	625	09/09/09 10:31	rselph	Q44380
2,4-Dinitrotoluene	BRL	µg/L	9.8	3.9	1	625	09/09/09 10:31	rselph	Q44380
2,6-Dinitrotoluene	BRL	µg/L	9.8	2.8	1	625	09/09/09 10:31	rselph	Q44380

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Laboratory Report

09/14/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

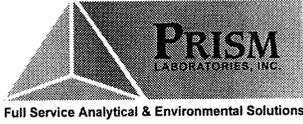
Project ID: NCDOT: Haywood County Client Sample ID: S1-MW1
 Project No.: WBS #34599.1.1 Prism Sample ID: 256469
 Sample Matrix: Water COC Group: G0809749
 Time Collected: 08/28/09 8:30
 Time Submitted: 08/28/09 14:02

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
2-Chloronaphthalene	BRL	µg/L	9.8	2.9	1	625	09/09/09 10:31	rselph	Q44380
2-Chlorophenol	BRL	µg/L	9.8	1.7	1	625	09/09/09 10:31	rselph	Q44380
2-Methylphenol	BRL	µg/L	9.8	1.8	1	625	09/09/09 10:31	rselph	Q44380
2-Nitrophenol	BRL	µg/L	9.8	2.2	1	625	09/09/09 10:31	rselph	Q44380
3&4-Methylphenol	BRL	µg/L	9.8	1.9	1	625	09/09/09 10:31	rselph	Q44380
3,3'-Dichlorobenzidine	BRL	µg/L	49	2.5	1	625	09/09/09 10:31	rselph	Q44380
4,6-Dinitro-2-methylphenol	BRL	µg/L	49	1.8	1	625	09/09/09 10:31	rselph	Q44380
4-Bromophenylphenylether	BRL	µg/L	9.8	1.9	1	625	09/09/09 10:31	rselph	Q44380
4-Chloro-3-methylphenol	BRL	µg/L	9.8	2.2	1	625	09/09/09 10:31	rselph	Q44380
4-Chlorophenylphenylether	BRL	µg/L	9.8	2.8	1	625	09/09/09 10:31	rselph	Q44380
4-Nitrophenol	BRL	µg/L	49	0.74	1	625	09/09/09 10:31	rselph	Q44380
Acenaphthene	BRL	µg/L	9.8	4.1	1	625	09/09/09 10:31	rselph	Q44380
Acenaphthylene	BRL	µg/L	9.8	2.7	1	625	09/09/09 10:31	rselph	Q44380
Anthracene	BRL	µg/L	9.8	1.7	1	625	09/09/09 10:31	rselph	Q44380
Benzo(a)anthracene	BRL	µg/L	9.8	2.1	1	625	09/09/09 10:31	rselph	Q44380
Benzo(a)pyrene	BRL	µg/L	9.8	1.6	1	625	09/09/09 10:31	rselph	Q44380
Benzo(b)fluoranthene	BRL	µg/L	9.8	1.2	1	625	09/09/09 10:31	rselph	Q44380
Benzo(g,h,i)perylene	BRL	µg/L	9.8	2.1	1	625	09/09/09 10:31	rselph	Q44380
Benzo(k)fluoranthene	BRL	µg/L	9.8	2.6	1	625	09/09/09 10:31	rselph	Q44380
Bis(2-chloroethoxy)methane	BRL	µg/L	9.8	2.3	1	625	09/09/09 10:31	rselph	Q44380
Bis(2-chloroethyl)ether	BRL	µg/L	9.8	1.9	1	625	09/09/09 10:31	rselph	Q44380
Bis(2-chloroisopropyl)ether	BRL	µg/L	9.8	2.3	1	625	09/09/09 10:31	rselph	Q44380
Bis(2-ethylhexyl)phthalate	BRL	µg/L	9.8	2.7	1	625	09/09/09 10:31	rselph	Q44380
Butylbenzylphthalate	BRL	µg/L	9.8	1.9	1	625	09/09/09 10:31	rselph	Q44380
Chrysene	BRL	µg/L	9.8	3.0	1	625	09/09/09 10:31	rselph	Q44380
Di-n-butylphthalate	BRL	µg/L	9.8	1.5	1	625	09/09/09 10:31	rselph	Q44380
Di-n-octylphthalate	BRL	µg/L	9.8	2.5	1	625	09/09/09 10:31	rselph	Q44380

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Laboratory Report

09/14/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County Client Sample ID: S1-MW1
 Project No.: WBS #34599.1.1 Prism Sample ID: 256469
 Sample Matrix: Water COC Group: G0809749

Time Collected: 08/28/09 8:30
 Time Submitted: 08/28/09 14:02

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Dibenzo(a,h)anthracene	BRL	µg/L	9.8	2.2	1	625	09/09/09 10:31	rselph	Q44380
Dibenzofuran	BRL	µg/L	9.8	3.5	1	625	09/09/09 10:31	rselph	Q44380
Diethylphthalate	BRL	µg/L	9.8	2.1	1	625	09/09/09 10:31	rselph	Q44380
Dimethylphthalate	BRL	µg/L	9.8	1.9	1	625	09/09/09 10:31	rselph	Q44380
Fluoranthene	BRL	µg/L	9.8	1.5	1	625	09/09/09 10:31	rselph	Q44380
Fluorene	BRL	µg/L	9.8	4.3	1	625	09/09/09 10:31	rselph	Q44380
Hexachlorobenzene	BRL	µg/L	9.8	2.0	1	625	09/09/09 10:31	rselph	Q44380
Hexachlorobutadiene	BRL	µg/L	9.8	1.7	1	625	09/09/09 10:31	rselph	Q44380
Hexachlorocyclopentadiene	BRL	µg/L	9.8	2.0	1	625	09/09/09 10:31	rselph	Q44380
Hexachloroethane	BRL	µg/L	9.8	2.2	1	625	09/09/09 10:31	rselph	Q44380
Indeno(1,2,3-cd)pyrene	BRL	µg/L	9.8	3.6	1	625	09/09/09 10:31	rselph	Q44380
Isophorone	BRL	µg/L	9.8	2.6	1	625	09/09/09 10:31	rselph	Q44380
N-Nitrosodi-n-propylamine	BRL	µg/L	9.8	2.2	1	625	09/09/09 10:31	rselph	Q44380
Naphthalene	BRL	µg/L	9.8	1.6	1	625	09/09/09 10:31	rselph	Q44380
Nitrobenzene	BRL	µg/L	9.8	2.1	1	625	09/09/09 10:31	rselph	Q44380
Pentachlorophenol	BRL	µg/L	9.8	2.0	1	625	09/09/09 10:31	rselph	Q44380
Phenanthrene	BRL	µg/L	9.8	1.2	1	625	09/09/09 10:31	rselph	Q44380
Phenol	BRL	µg/L	9.8	0.57	1	625	09/09/09 10:31	rselph	Q44380
Pyrene	BRL	µg/L	9.8	1.8	1	625	09/09/09 10:31	rselph	Q44380

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

09/14/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County Client Sample ID: S2-MW-1
 Project No.: WBS #34599.1.1 Prism Sample ID: 256470
 Sample Matrix: Water COC Group: G0809749
 Time Collected: 08/28/09 9:15
 Time Submitted: 08/28/09 14:02

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Purgeable Halocarbons and Aromatics by GC-PID/ELCD									
1,1,1-Trichloroethane	BRL	µg/L	10	2.1	10	601/602	09/09/09 3:10	erussell	Q44354
1,1,2,2-Tetrachloroethane	BRL	µg/L	10	2.1	10	601/602	09/09/09 3:10	erussell	Q44354
1,1,2-Trichloroethane	BRL	µg/L	10	1.3	10	601/602	09/09/09 3:10	erussell	Q44354
1,1-Dichloroethane	BRL	µg/L	10	1.4	10	601/602	09/09/09 3:10	erussell	Q44354
1,1-Dichloroethene	BRL	µg/L	10	1.9	10	601/602	09/09/09 3:10	erussell	Q44354
1,2-Dibromoethane (EDB)	BRL	µg/L	10	1.2	10	601/602	09/09/09 3:10	erussell	Q44354
1,2-Dichlorobenzene	BRL	µg/L	10	0.96	10	601/602	09/09/09 3:10	erussell	Q44354
1,2-Dichloroethane	BRL	µg/L	10	1.6	10	601/602	09/09/09 3:10	erussell	Q44354
1,2-Dichloropropane	BRL	µg/L	10	1.6	10	601/602	09/09/09 3:10	erussell	Q44354
1,3-Dichlorobenzene	BRL	µg/L	10	1.8	10	601/602	09/09/09 3:10	erussell	Q44354
1,4-Dichlorobenzene	BRL	µg/L	10	1.2	10	601/602	09/09/09 3:10	erussell	Q44354
Benzene	21	µg/L	5.0	1.9	10	601/602	09/09/09 3:10	erussell	Q44354
Bromodichloromethane	BRL	µg/L	10	1.1	10	601/602	09/09/09 3:10	erussell	Q44354
Bromoform	BRL	µg/L	10	0.94	10	601/602	09/09/09 3:10	erussell	Q44354
Bromomethane	BRL	µg/L	50	0.87	10	601/602	09/09/09 3:10	erussell	Q44354
Carbon tetrachloride	BRL	µg/L	10	2.3	10	601/602	09/09/09 3:10	erussell	Q44354
Chlorobenzene	BRL	µg/L	10	3.7	10	601/602	09/09/09 3:10	erussell	Q44354
Chloroethane	BRL	µg/L	50	2.5	10	601/602	09/09/09 3:10	erussell	Q44354
Chloroform	BRL	µg/L	10	1.8	10	601/602	09/09/09 3:10	erussell	Q44354
Chloromethane	BRL	µg/L	50	2.4	10	601/602	09/09/09 3:10	erussell	Q44354
cis-1,2-Dichloroethene	BRL	µg/L	10	5.1	10	601/602	09/09/09 3:10	erussell	Q44354
cis-1,3-Dichloropropene	BRL	µg/L	10	1.6	10	601/602	09/09/09 3:10	erussell	Q44354
Dibromochloromethane	BRL	µg/L	10	1.2	10	601/602	09/09/09 3:10	erussell	Q44354
Dichlorodifluoromethane	BRL	µg/L	50	2.1	10	601/602	09/09/09 3:10	erussell	Q44354
Ethylbenzene	210	µg/L	10	2.8	10	601/602	09/09/09 3:10	erussell	Q44354
Isopropyl ether (IPE)	BRL	µg/L	50	1.8	10	601/602	09/09/09 3:10	erussell	Q44354
m,p-Xylenes	680	µg/L	20	5.0	10	601/602	09/09/09 3:10	erussell	Q44354

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

09/14/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County Client Sample ID: S2-MW-1
 Project No.: WBS #34599.1.1 Prism Sample ID: 256470
 Sample Matrix: Water COC Group: G0809749
 Time Collected: 08/28/09 9:15
 Time Submitted: 08/28/09 14:02

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Methyl t-butyl ether (MTBE)	BRL	µg/L	50	1.7	10	601/602	09/09/09 3:10	erussell	Q44354
Methylene Chloride	BRL	µg/L	10	1.2	10	601/602	09/09/09 3:10	erussell	Q44354
Naphthalene	45	µg/L	10	6.3	10	601/602	09/09/09 3:10	erussell	Q44354
o-Xylene	350	µg/L	10	3.1	10	601/602	09/09/09 3:10	erussell	Q44354
Tetrachloroethene	BRL	µg/L	10	2.6	10	601/602	09/09/09 3:10	erussell	Q44354
Toluene	1400	µg/L	100	23	100	601/602	09/10/09 9:40	erussell	Q44354
trans-1,2-Dichloroethene	BRL	µg/L	10	1.7	10	601/602	09/09/09 3:10	erussell	Q44354
trans-1,3-Dichloropropene	BRL	µg/L	10	1.9	10	601/602	09/09/09 3:10	erussell	Q44354
Trichloroethene	BRL	µg/L	10	2.1	10	601/602	09/09/09 3:10	erussell	Q44354
Trichlorofluoromethane	BRL	µg/L	50	2.5	10	601/602	09/09/09 3:10	erussell	Q44354
Vinyl chloride	BRL	µg/L	10	3.3	10	601/602	09/09/09 3:10	erussell	Q44354

Surrogate	% Recovery	Control Limits
Bromochlorobenzene-ELCD	98	56 - 148
1,4-Difluorobenzene-PID	99	69 - 140

Semivolatile Organic Compounds by GC/MS

1,2,4-Trichlorobenzene	BRL	µg/L	9.8	1.7	1	625	09/09/09 12:23	rselph	Q44380
1,2-Dichlorobenzene	BRL	µg/L	9.8	1.9	1	625	09/09/09 12:23	rselph	Q44380
1,3-Dichlorobenzene	BRL	µg/L	9.8	2.0	1	625	09/09/09 12:23	rselph	Q44380
1,4-Dichlorobenzene	BRL	µg/L	9.8	1.8	1	625	09/09/09 12:23	rselph	Q44380
2,4,5-Trichlorophenol	BRL	µg/L	9.8	2.6	1	625	09/09/09 12:23	rselph	Q44380
2,4,6-Trichlorophenol	BRL	µg/L	9.8	3.1	1	625	09/09/09 12:23	rselph	Q44380
2,4-Dichlorophenol	BRL	µg/L	9.8	1.5	1	625	09/09/09 12:23	rselph	Q44380
2,4-Dimethylphenol	BRL	µg/L	9.8	2.4	1	625	09/09/09 12:23	rselph	Q44380
2,4-Dinitrophenol	BRL	µg/L	49	1.1	1	625	09/09/09 12:23	rselph	Q44380
2,4-Dinitrotoluene	BRL	µg/L	9.8	3.9	1	625	09/09/09 12:23	rselph	Q44380
2,6-Dinitrotoluene	BRL	µg/L	9.8	2.8	1	625	09/09/09 12:23	rselph	Q44380

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Laboratory Report

09/14/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County Client Sample ID: S2-MW-1
 Project No.: WBS #34599.1.1 Prism Sample ID: 256470
 Sample Matrix: Water COC Group: G0809749
 Time Collected: 08/28/09 9:15
 Time Submitted: 08/28/09 14:02

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
2-Chloronaphthalene	BRL	µg/L	9.8	2.9	1	625	09/09/09 12:23	rselph	Q44380
2-Chlorophenol	BRL	µg/L	9.8	1.7	1	625	09/09/09 12:23	rselph	Q44380
2-Methylphenol	6.0 J	µg/L	9.8	1.8	1	625	09/09/09 12:23	rselph	Q44380
2-Nitrophenol	BRL	µg/L	9.8	2.2	1	625	09/09/09 12:23	rselph	Q44380
3&4-Methylphenol	BRL	µg/L	9.8	1.9	1	625	09/09/09 12:23	rselph	Q44380
3,3'-Dichlorobenzidine	BRL	µg/L	49	2.5	1	625	09/09/09 12:23	rselph	Q44380
4,6-Dinitro-2-methylphenol	BRL	µg/L	49	1.8	1	625	09/09/09 12:23	rselph	Q44380
4-Bromophenylphenylether	BRL	µg/L	9.8	1.9	1	625	09/09/09 12:23	rselph	Q44380
4-Chloro-3-methylphenol	BRL	µg/L	9.8	2.2	1	625	09/09/09 12:23	rselph	Q44380
4-Chlorophenylphenylether	BRL	µg/L	9.8	2.8	1	625	09/09/09 12:23	rselph	Q44380
4-Nitrophenol	BRL	µg/L	49	0.74	1	625	09/09/09 12:23	rselph	Q44380
Acenaphthene	BRL	µg/L	9.8	4.1	1	625	09/09/09 12:23	rselph	Q44380
Acenaphthylene	BRL	µg/L	9.8	2.7	1	625	09/09/09 12:23	rselph	Q44380
Anthracene	BRL	µg/L	9.8	1.7	1	625	09/09/09 12:23	rselph	Q44380
Benzo(a)anthracene	BRL	µg/L	9.8	2.1	1	625	09/09/09 12:23	rselph	Q44380
Benzo(a)pyrene	BRL	µg/L	9.8	1.6	1	625	09/09/09 12:23	rselph	Q44380
Benzo(b)fluoranthene	BRL	µg/L	9.8	1.2	1	625	09/09/09 12:23	rselph	Q44380
Benzo(g,h,i)perylene	BRL	µg/L	9.8	2.1	1	625	09/09/09 12:23	rselph	Q44380
Benzo(k)fluoranthene	BRL	µg/L	9.8	2.6	1	625	09/09/09 12:23	rselph	Q44380
Bis(2-chloroethoxy)methane	BRL	µg/L	9.8	2.3	1	625	09/09/09 12:23	rselph	Q44380
Bis(2-chloroethyl)ether	BRL	µg/L	9.8	1.9	1	625	09/09/09 12:23	rselph	Q44380
Bis(2-chloroisopropyl)ether	BRL	µg/L	9.8	2.3	1	625	09/09/09 12:23	rselph	Q44380
Bis(2-ethylhexyl)phthalate	BRL	µg/L	9.8	2.7	1	625	09/09/09 12:23	rselph	Q44380
Butylbenzylphthalate	BRL	µg/L	9.8	1.9	1	625	09/09/09 12:23	rselph	Q44380
Chrysene	BRL	µg/L	9.8	3.0	1	625	09/09/09 12:23	rselph	Q44380
Di-n-butylphthalate	BRL	µg/L	9.8	1.5	1	625	09/09/09 12:23	rselph	Q44380
Di-n-octylphthalate	BRL	µg/L	9.8	2.5	1	625	09/09/09 12:23	rselph	Q44380

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Laboratory Report

09/14/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
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 Greensboro, NC 27401

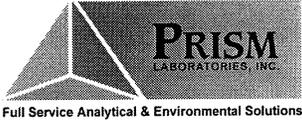
Project ID: NCDOT: Haywood County Client Sample ID: S2-MW-1
 Project No.: WBS #34599.1.1 Prism Sample ID: 256470
 Sample Matrix: Water COC Group: G0809749
 Time Collected: 08/28/09 9:15
 Time Submitted: 08/28/09 14:02

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Dibenzo(a,h)anthracene	BRL	µg/L	9.8	2.2	1	625	09/09/09 12:23	rselph	Q44380
Dibenzofuran	BRL	µg/L	9.8	3.5	1	625	09/09/09 12:23	rselph	Q44380
Diethylphthalate	BRL	µg/L	9.8	2.1	1	625	09/09/09 12:23	rselph	Q44380
Dimethylphthalate	BRL	µg/L	9.8	1.9	1	625	09/09/09 12:23	rselph	Q44380
Fluoranthene	BRL	µg/L	9.8	1.5	1	625	09/09/09 12:23	rselph	Q44380
Fluorene	BRL	µg/L	9.8	4.3	1	625	09/09/09 12:23	rselph	Q44380
Hexachlorobenzene	BRL	µg/L	9.8	2.0	1	625	09/09/09 12:23	rselph	Q44380
Hexachlorobutadiene	BRL	µg/L	9.8	1.7	1	625	09/09/09 12:23	rselph	Q44380
Hexachlorocyclopentadiene	BRL	µg/L	9.8	2.0	1	625	09/09/09 12:23	rselph	Q44380
Hexachloroethane	BRL	µg/L	9.8	2.2	1	625	09/09/09 12:23	rselph	Q44380
Indeno(1,2,3-cd)pyrene	BRL	µg/L	9.8	3.6	1	625	09/09/09 12:23	rselph	Q44380
Isophorone	BRL	µg/L	9.8	2.6	1	625	09/09/09 12:23	rselph	Q44380
N-Nitrosodi-n-propylamine	BRL	µg/L	9.8	2.2	1	625	09/09/09 12:23	rselph	Q44380
Naphthalene	BRL	µg/L	9.8	1.6	1	625	09/09/09 12:23	rselph	Q44380
Nitrobenzene	BRL	µg/L	9.8	2.1	1	625	09/09/09 12:23	rselph	Q44380
Pentachlorophenol	BRL	µg/L	9.8	2.0	1	625	09/09/09 12:23	rselph	Q44380
Phenanthrene	BRL	µg/L	9.8	1.2	1	625	09/09/09 12:23	rselph	Q44380
Phenol	BRL	µg/L	9.8	0.57	1	625	09/09/09 12:23	rselph	Q44380
Pyrene	BRL	µg/L	9.8	1.8	1	625	09/09/09 12:23	rselph	Q44380

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Project ID: NCDOT: Haywood County Client Sample ID: S2-MW-1
 Project No.: WBS #34599.1.1 Prism Sample ID: 256470
 Sample Matrix: Water COC Group: G0809749
 Time Collected: 08/28/09 9:15
 Time Submitted: 08/28/09 14:02

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Sample Preparation:				1020 mL /	1 mL	625	09/04/09 8:00	smanivanh	P25512

Surrogate	% Recovery	Control Limits
Terphenyl-d14	96	10 - 154
Phenol-d5	20	10 - 48
Nitrobenzene-d5	86	22 - 103
2-Fluorophenol	31	10 - 59
2-Fluorobiphenyl	94	29 - 112
2,4,6-Tribromophenol	103	27 - 125

TIC's By 625

	Est. Conc	Units
Unknown aromatic	49	ug/L
Unknown aromatic	25	ug/L
Trimethylbenzene	38	ug/L
Trimethylbenzene	150	ug/L
Toluene	260	ug/L
m&p-Xylene	140	ug/L
Indane	22	ug/L
Ethylmethylbenzene	65	ug/L
Ethylmethylbenzene	59	ug/L
Ethylmethylbenzene	120	ug/L

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Project ID: NCDOT: Haywood County Client Sample ID: S2-MW-1
 Project No.: WBS #34599.1.1 Prism Sample ID: 256470
 Sample Matrix: Water COC Group: G0809749
 Time Collected: 08/28/09 9:15
 Time Submitted: 08/28/09 14:02

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a wet-weight basis

Angela D. Overcash, V.P. Laboratory Services



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Laboratory Report

09/14/09

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 Attn: Helen Corley
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 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County Client Sample ID: S2-MW-2
 Project No.: WBS #34599.1.1 Prism Sample ID: 256471
 Sample Matrix: Water COC Group: G0809749
 Time Collected: 08/28/09 10:15
 Time Submitted: 08/28/09 14:02

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Purgeable Halocarbons and Aromatics by GC-PID/ELCD									
1,1,1-Trichloroethane	BRL	µg/L	1.0	0.21	1	601/602	09/09/09 3:57	erussell	Q44354
1,1,2,2-Tetrachloroethane	BRL	µg/L	1.0	0.21	1	601/602	09/09/09 3:57	erussell	Q44354
1,1,2-Trichloroethane	BRL	µg/L	1.0	0.13	1	601/602	09/09/09 3:57	erussell	Q44354
1,1-Dichloroethane	BRL	µg/L	1.0	0.14	1	601/602	09/09/09 3:57	erussell	Q44354
1,1-Dichloroethene	BRL	µg/L	1.0	0.19	1	601/602	09/09/09 3:57	erussell	Q44354
1,2-Dibromoethane (EDB)	BRL	µg/L	1.0	0.12	1	601/602	09/09/09 3:57	erussell	Q44354
1,2-Dichlorobenzene	BRL	µg/L	1.0	0.096	1	601/602	09/09/09 3:57	erussell	Q44354
1,2-Dichloroethane	BRL	µg/L	1.0	0.16	1	601/602	09/09/09 3:57	erussell	Q44354
1,2-Dichloropropane	BRL	µg/L	1.0	0.16	1	601/602	09/09/09 3:57	erussell	Q44354
1,3-Dichlorobenzene	BRL	µg/L	1.0	0.17	1	601/602	09/09/09 3:57	erussell	Q44354
1,4-Dichlorobenzene	BRL	µg/L	1.0	0.12	1	601/602	09/09/09 3:57	erussell	Q44354
Benzene	15	µg/L	0.50	0.19	1	601/602	09/09/09 3:57	erussell	Q44354
Bromodichloromethane	BRL	µg/L	1.0	0.11	1	601/602	09/09/09 3:57	erussell	Q44354
Bromoform	BRL	µg/L	1.0	0.094	1	601/602	09/09/09 3:57	erussell	Q44354
Bromomethane	BRL	µg/L	5.0	0.087	1	601/602	09/09/09 3:57	erussell	Q44354
Carbon tetrachloride	BRL	µg/L	1.0	0.23	1	601/602	09/09/09 3:57	erussell	Q44354
Chlorobenzene	BRL	µg/L	1.0	0.37	1	601/602	09/09/09 3:57	erussell	Q44354
Chloroethane	BRL	µg/L	5.0	0.25	1	601/602	09/09/09 3:57	erussell	Q44354
Chloroform	BRL	µg/L	1.0	0.18	1	601/602	09/09/09 3:57	erussell	Q44354
Chloromethane	BRL	µg/L	5.0	0.24	1	601/602	09/09/09 3:57	erussell	Q44354
cis-1,2-Dichloroethene	BRL	µg/L	1.0	0.51	1	601/602	09/09/09 3:57	erussell	Q44354
cis-1,3-Dichloropropene	BRL	µg/L	1.0	0.16	1	601/602	09/09/09 3:57	erussell	Q44354
Dibromochloromethane	BRL	µg/L	1.0	0.12	1	601/602	09/09/09 3:57	erussell	Q44354
Dichlorodifluoromethane	BRL	µg/L	5.0	0.21	1	601/602	09/09/09 3:57	erussell	Q44354
Ethylbenzene	29	µg/L	1.0	0.28	1	601/602	09/09/09 3:57	erussell	Q44354
Isopropyl ether (IPE)	BRL	µg/L	5.0	0.18	1	601/602	09/09/09 3:57	erussell	Q44354
m,p-Xylenes	34	µg/L	2.0	0.51	1	601/602	09/09/09 3:57	erussell	Q44354

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

09/14/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County Client Sample ID: S2-MW-2
 Project No.: WBS #34599.1.1 Prism Sample ID: 256471
 Sample Matrix: Water COC Group: G0809749
 Time Collected: 08/28/09 10:15
 Time Submitted: 08/28/09 14:02

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Methyl t-butyl ether (MTBE)	BRL	µg/L	5.0	0.17	1	601/602	09/09/09 3:57	erussell	Q44354
Methylene Chloride	BRL	µg/L	1.0	0.12	1	601/602	09/09/09 3:57	erussell	Q44354
Naphthalene	20	µg/L	1.0	0.63	1	601/602	09/09/09 3:57	erussell	Q44354
o-Xylene	10	µg/L	1.0	0.31	1	601/602	09/09/09 3:57	erussell	Q44354
Tetrachloroethene	BRL	µg/L	1.0	0.26	1	601/602	09/09/09 3:57	erussell	Q44354
Toluene	5.9	µg/L	1.0	0.23	1	601/602	09/09/09 3:57	erussell	Q44354
trans-1,2-Dichloroethene	BRL	µg/L	1.0	0.17	1	601/602	09/09/09 3:57	erussell	Q44354
trans-1,3-Dichloropropene	BRL	µg/L	1.0	0.19	1	601/602	09/09/09 3:57	erussell	Q44354
Trichloroethene	BRL	µg/L	1.0	0.21	1	601/602	09/09/09 3:57	erussell	Q44354
Trichlorofluoromethane	BRL	µg/L	5.0	0.24	1	601/602	09/09/09 3:57	erussell	Q44354
Vinyl chloride	BRL	µg/L	1.0	0.33	1	601/602	09/09/09 3:57	erussell	Q44354

Surrogate	% Recovery	Control Limits
Bromochlorobenzene-ELCD	103	56 - 148
1,4-Difluorobenzene-PID	116	69 - 140

Semivolatile Organic Compounds by GC/MS

1,2,4-Trichlorobenzene	BRL	µg/L	9.8	1.7	1	625	09/09/09 12:51	rselph	Q44380
1,2-Dichlorobenzene	BRL	µg/L	9.8	1.9	1	625	09/09/09 12:51	rselph	Q44380
1,3-Dichlorobenzene	BRL	µg/L	9.8	2.0	1	625	09/09/09 12:51	rselph	Q44380
1,4-Dichlorobenzene	BRL	µg/L	9.8	1.8	1	625	09/09/09 12:51	rselph	Q44380
2,4,5-Trichlorophenol	BRL	µg/L	9.8	2.6	1	625	09/09/09 12:51	rselph	Q44380
2,4,6-Trichlorophenol	BRL	µg/L	9.8	3.1	1	625	09/09/09 12:51	rselph	Q44380
2,4-Dichlorophenol	BRL	µg/L	9.8	1.5	1	625	09/09/09 12:51	rselph	Q44380
2,4-Dimethylphenol	BRL	µg/L	9.8	2.4	1	625	09/09/09 12:51	rselph	Q44380
2,4-Dinitrophenol	BRL	µg/L	49	1.1	1	625	09/09/09 12:51	rselph	Q44380
2,4-Dinitrotoluene	BRL	µg/L	9.8	3.9	1	625	09/09/09 12:51	rselph	Q44380
2,6-Dinitrotoluene	BRL	µg/L	9.8	2.8	1	625	09/09/09 12:51	rselph	Q44380

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NC Certification No. 402
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Laboratory Report

09/14/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

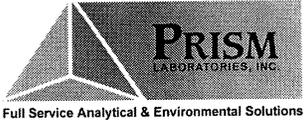
Project ID: NCDOT: Haywood County Client Sample ID: S2-MW-2
 Project No.: WBS #34599.1.1 Prism Sample ID: 256471
 Sample Matrix: Water COC Group: G0809749
 Time Collected: 08/28/09 10:15
 Time Submitted: 08/28/09 14:02

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
2-Chloronaphthalene	BRL	µg/L	9.8	2.9	1	625	09/09/09 12:51	rselph	Q44380
2-Chlorophenol	BRL	µg/L	9.8	1.7	1	625	09/09/09 12:51	rselph	Q44380
2-Methylphenol	BRL	µg/L	9.8	1.8	1	625	09/09/09 12:51	rselph	Q44380
2-Nitrophenol	BRL	µg/L	9.8	2.2	1	625	09/09/09 12:51	rselph	Q44380
3&4-Methylphenol	BRL	µg/L	9.8	1.9	1	625	09/09/09 12:51	rselph	Q44380
3,3'-Dichlorobenzidine	BRL	µg/L	49	2.5	1	625	09/09/09 12:51	rselph	Q44380
4,6-Dinitro-2-methylphenol	BRL	µg/L	49	1.8	1	625	09/09/09 12:51	rselph	Q44380
4-Bromophenylphenylether	BRL	µg/L	9.8	1.9	1	625	09/09/09 12:51	rselph	Q44380
4-Chloro-3-methylphenol	BRL	µg/L	9.8	2.2	1	625	09/09/09 12:51	rselph	Q44380
4-Chlorophenylphenylether	BRL	µg/L	9.8	2.8	1	625	09/09/09 12:51	rselph	Q44380
4-Nitrophenol	BRL	µg/L	49	0.74	1	625	09/09/09 12:51	rselph	Q44380
Acenaphthene	BRL	µg/L	9.8	4.1	1	625	09/09/09 12:51	rselph	Q44380
Acenaphthylene	BRL	µg/L	9.8	2.7	1	625	09/09/09 12:51	rselph	Q44380
Anthracene	BRL	µg/L	9.8	1.7	1	625	09/09/09 12:51	rselph	Q44380
Benzo(a)anthracene	BRL	µg/L	9.8	2.1	1	625	09/09/09 12:51	rselph	Q44380
Benzo(a)pyrene	BRL	µg/L	9.8	1.6	1	625	09/09/09 12:51	rselph	Q44380
Benzo(b)fluoranthene	BRL	µg/L	9.8	1.2	1	625	09/09/09 12:51	rselph	Q44380
Benzo(g,h,i)perylene	BRL	µg/L	9.8	2.1	1	625	09/09/09 12:51	rselph	Q44380
Benzo(k)fluoranthene	BRL	µg/L	9.8	2.6	1	625	09/09/09 12:51	rselph	Q44380
Bis(2-chloroethoxy)methane	BRL	µg/L	9.8	2.3	1	625	09/09/09 12:51	rselph	Q44380
Bis(2-chloroethyl)ether	BRL	µg/L	9.8	1.9	1	625	09/09/09 12:51	rselph	Q44380
Bis(2-chloroisopropyl)ether	BRL	µg/L	9.8	2.3	1	625	09/09/09 12:51	rselph	Q44380
Bis(2-ethylhexyl)phthalate	BRL	µg/L	9.8	2.7	1	625	09/09/09 12:51	rselph	Q44380
Butylbenzylphthalate	BRL	µg/L	9.8	1.9	1	625	09/09/09 12:51	rselph	Q44380
Chrysene	BRL	µg/L	9.8	3.0	1	625	09/09/09 12:51	rselph	Q44380
Di-n-butylphthalate	BRL	µg/L	9.8	1.5	1	625	09/09/09 12:51	rselph	Q44380
Di-n-octylphthalate	BRL	µg/L	9.8	2.5	1	625	09/09/09 12:51	rselph	Q44380

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

09/14/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County Client Sample ID: S2-MW-2
 Project No.: WBS #34599.1.1 Prism Sample ID: 256471
 Sample Matrix: Water COC Group: G0809749
 Time Collected: 08/28/09 10:15
 Time Submitted: 08/28/09 14:02

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Dibenzo(a,h)anthracene	BRL	µg/L	9.8	2.2	1	625	09/09/09 12:51	rselph	Q44380
Dibenzofuran	BRL	µg/L	9.8	3.5	1	625	09/09/09 12:51	rselph	Q44380
Diethylphthalate	BRL	µg/L	9.8	2.1	1	625	09/09/09 12:51	rselph	Q44380
Dimethylphthalate	BRL	µg/L	9.8	1.9	1	625	09/09/09 12:51	rselph	Q44380
Fluoranthene	BRL	µg/L	9.8	1.5	1	625	09/09/09 12:51	rselph	Q44380
Fluorene	BRL	µg/L	9.8	4.3	1	625	09/09/09 12:51	rselph	Q44380
Hexachlorobenzene	BRL	µg/L	9.8	2.0	1	625	09/09/09 12:51	rselph	Q44380
Hexachlorobutadiene	BRL	µg/L	9.8	1.7	1	625	09/09/09 12:51	rselph	Q44380
Hexachlorocyclopentadiene	BRL	µg/L	9.8	2.0	1	625	09/09/09 12:51	rselph	Q44380
Hexachloroethane	BRL	µg/L	9.8	2.2	1	625	09/09/09 12:51	rselph	Q44380
Indeno(1,2,3-cd)pyrene	BRL	µg/L	9.8	3.6	1	625	09/09/09 12:51	rselph	Q44380
Isophorone	BRL	µg/L	9.8	2.6	1	625	09/09/09 12:51	rselph	Q44380
N-Nitrosodi-n-propylamine	BRL	µg/L	9.8	2.2	1	625	09/09/09 12:51	rselph	Q44380
Naphthalene	11	µg/L	9.8	1.6	1	625	09/09/09 12:51	rselph	Q44380
Nitrobenzene	BRL	µg/L	9.8	2.1	1	625	09/09/09 12:51	rselph	Q44380
Pentachlorophenol	BRL	µg/L	9.8	2.0	1	625	09/09/09 12:51	rselph	Q44380
Phenanthrene	BRL	µg/L	9.8	1.2	1	625	09/09/09 12:51	rselph	Q44380
Phenol	BRL	µg/L	9.8	0.57	1	625	09/09/09 12:51	rselph	Q44380
Pyrene	BRL	µg/L	9.8	1.8	1	625	09/09/09 12:51	rselph	Q44380

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Laboratory Report

09/14/09

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 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
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 Greensboro, NC 27401

Project ID: NCDOT: Haywood County Client Sample ID: S2-MW-2
 Project No.: WBS #34599.1.1 Prism Sample ID: 256471
 Sample Matrix: Water COC Group: G0809749
 Time Collected: 08/28/09 10:15
 Time Submitted: 08/28/09 14:02

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Sample Preparation:				1020 mL /	1 mL	625	09/04/09 8:00	smanivanh	P25512

Surrogate	% Recovery	Control Limits
Terphenyl-d14	116	10 - 154
Phenol-d5	27	10 - 48
Nitrobenzene-d5	95	22 - 103
2-Fluorophenol	38	10 - 59
2-Fluorobiphenyl	104	29 - 112
2,4,6-Tribromophenol	91	27 - 125

TIC's By 625	Est.Conc	Units
Unknown aromatic	85	ug/L
Unknown aromatic	24	ug/L
Unknown aromatic	23	ug/L
Unknown aromatic	19	ug/L
Unknown	14	ug/L
Unknown	13	ug/L
Trimethylbenzene	17	ug/L
Indane	23	ug/L
Ethylbenzene	23	ug/L
Diethylbenzene	27	ug/L

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Project ID: NCDOT: Haywood County Client Sample ID: S2-MW-2
 Project No.: WBS #34599.1.1 Prism Sample ID: 256471
 Sample Matrix: Water COC Group: G0809749
 Time Collected: 08/28/09 10:15
 Time Submitted: 08/28/09 14:02

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a wet-weight basis

Angela D. Overcash, V.P. Laboratory Services



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Laboratory Report

09/14/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County Client Sample ID: SW-1
 Project No.: WBS #34599.1.1 Prism Sample ID: 256472
 Sample Matrix: Water COC Group: G0809749
 Time Collected: 08/28/09 10:45
 Time Submitted: 08/28/09 14:02

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Purgeable Halocarbons and Aromatics by GC-PID/ELCD									
1,1,1-Trichloroethane	BRL	µg/L	1.0	0.21	1	601/602	09/08/09 16:58	erussell	Q44354
1,1,2,2-Tetrachloroethane	BRL	µg/L	1.0	0.21	1	601/602	09/08/09 16:58	erussell	Q44354
1,1,2-Trichloroethane	BRL	µg/L	1.0	0.13	1	601/602	09/08/09 16:58	erussell	Q44354
1,1-Dichloroethane	BRL	µg/L	1.0	0.14	1	601/602	09/08/09 16:58	erussell	Q44354
1,1-Dichloroethene	BRL	µg/L	1.0	0.19	1	601/602	09/08/09 16:58	erussell	Q44354
1,2-Dibromoethane (EDB)	BRL	µg/L	1.0	0.12	1	601/602	09/08/09 16:58	erussell	Q44354
1,2-Dichlorobenzene	BRL	µg/L	1.0	0.096	1	601/602	09/08/09 16:58	erussell	Q44354
1,2-Dichloroethane	BRL	µg/L	1.0	0.16	1	601/602	09/08/09 16:58	erussell	Q44354
1,2-Dichloropropane	BRL	µg/L	1.0	0.16	1	601/602	09/08/09 16:58	erussell	Q44354
1,3-Dichlorobenzene	BRL	µg/L	1.0	0.17	1	601/602	09/08/09 16:58	erussell	Q44354
1,4-Dichlorobenzene	BRL	µg/L	1.0	0.12	1	601/602	09/08/09 16:58	erussell	Q44354
Benzene	BRL	µg/L	0.50	0.19	1	601/602	09/08/09 16:58	erussell	Q44354
Bromodichloromethane	BRL	µg/L	1.0	0.11	1	601/602	09/08/09 16:58	erussell	Q44354
Bromoform	BRL	µg/L	1.0	0.094	1	601/602	09/08/09 16:58	erussell	Q44354
Bromomethane	BRL	µg/L	5.0	0.087	1	601/602	09/08/09 16:58	erussell	Q44354
Carbon tetrachloride	BRL	µg/L	1.0	0.23	1	601/602	09/08/09 16:58	erussell	Q44354
Chlorobenzene	BRL	µg/L	1.0	0.37	1	601/602	09/08/09 16:58	erussell	Q44354
Chloroethane	BRL	µg/L	5.0	0.25	1	601/602	09/08/09 16:58	erussell	Q44354
Chloroform	BRL	µg/L	1.0	0.18	1	601/602	09/08/09 16:58	erussell	Q44354
Chloromethane	BRL	µg/L	5.0	0.24	1	601/602	09/08/09 16:58	erussell	Q44354
cis-1,2-Dichloroethene	BRL	µg/L	1.0	0.51	1	601/602	09/08/09 16:58	erussell	Q44354
cis-1,3-Dichloropropene	BRL	µg/L	1.0	0.16	1	601/602	09/08/09 16:58	erussell	Q44354
Dibromochloromethane	BRL	µg/L	1.0	0.12	1	601/602	09/08/09 16:58	erussell	Q44354
Dichlorodifluoromethane	BRL	µg/L	5.0	0.21	1	601/602	09/08/09 16:58	erussell	Q44354
Ethylbenzene	BRL	µg/L	1.0	0.28	1	601/602	09/08/09 16:58	erussell	Q44354
Isopropyl ether (IPE)	BRL	µg/L	5.0	0.18	1	601/602	09/08/09 16:58	erussell	Q44354
m,p-Xylenes	BRL	µg/L	2.0	0.51	1	601/602	09/08/09 16:58	erussell	Q44354

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Project ID: NCDOT: Haywood County Client Sample ID: SW-1
 Project No.: WBS #34599.1.1 Prism Sample ID: 256472
 Sample Matrix: Water COC Group: G0809749
 Time Collected: 08/28/09 10:45
 Time Submitted: 08/28/09 14:02

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Methyl t-butyl ether (MTBE)	BRL	µg/L	5.0	0.17	1	601/602	09/08/09 16:58	erussell	Q44354
Methylene Chloride	BRL	µg/L	1.0	0.12	1	601/602	09/08/09 16:58	erussell	Q44354
Naphthalene	BRL	µg/L	1.0	0.63	1	601/602	09/08/09 16:58	erussell	Q44354
o-Xylene	BRL	µg/L	1.0	0.31	1	601/602	09/08/09 16:58	erussell	Q44354
Tetrachloroethene	BRL	µg/L	1.0	0.26	1	601/602	09/08/09 16:58	erussell	Q44354
Toluene	BRL	µg/L	1.0	0.23	1	601/602	09/08/09 16:58	erussell	Q44354
trans-1,2-Dichloroethene	BRL	µg/L	1.0	0.17	1	601/602	09/08/09 16:58	erussell	Q44354
trans-1,3-Dichloropropene	BRL	µg/L	1.0	0.19	1	601/602	09/08/09 16:58	erussell	Q44354
Trichloroethene	BRL	µg/L	1.0	0.21	1	601/602	09/08/09 16:58	erussell	Q44354
Trichlorofluoromethane	BRL	µg/L	5.0	0.24	1	601/602	09/08/09 16:58	erussell	Q44354
Vinyl chloride	BRL	µg/L	1.0	0.33	1	601/602	09/08/09 16:58	erussell	Q44354

Surrogate	% Recovery	Control Limits
Bromochlorobenzene-ELCD	99	56 - 148
1,4-Difluorobenzene-PID	98	69 - 140

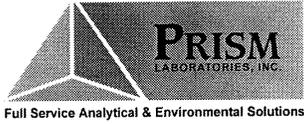
Semivolatile Organic Compounds by GC/MS

1,2,4-Trichlorobenzene	BRL	µg/L	9.8	1.7	1	625	09/09/09 13:18	rselph	Q44380
1,2-Dichlorobenzene	BRL	µg/L	9.8	1.9	1	625	09/09/09 13:18	rselph	Q44380
1,3-Dichlorobenzene	BRL	µg/L	9.8	2.0	1	625	09/09/09 13:18	rselph	Q44380
1,4-Dichlorobenzene	BRL	µg/L	9.8	1.8	1	625	09/09/09 13:18	rselph	Q44380
2,4,5-Trichlorophenol	BRL	µg/L	9.8	2.6	1	625	09/09/09 13:18	rselph	Q44380
2,4,6-Trichlorophenol	BRL	µg/L	9.8	3.1	1	625	09/09/09 13:18	rselph	Q44380
2,4-Dichlorophenol	BRL	µg/L	9.8	1.5	1	625	09/09/09 13:18	rselph	Q44380
2,4-Dimethylphenol	BRL	µg/L	9.8	2.4	1	625	09/09/09 13:18	rselph	Q44380
2,4-Dinitrophenol	BRL	µg/L	49	1.1	1	625	09/09/09 13:18	rselph	Q44380
2,4-Dinitrotoluene	BRL	µg/L	9.8	3.9	1	625	09/09/09 13:18	rselph	Q44380
2,6-Dinitrotoluene	BRL	µg/L	9.8	2.8	1	625	09/09/09 13:18	rselph	Q44380

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

09/14/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County Client Sample ID: SW-1
 Project No.: WBS #34599.1.1 Prism Sample ID: 256472
 Sample Matrix: Water COC Group: G0809749
 Time Collected: 08/28/09 10:45
 Time Submitted: 08/28/09 14:02

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
2-Chloronaphthalene	BRL	µg/L	9.8	2.9	1	625	09/09/09 13:18	rselph	Q44380
2-Chlorophenol	BRL	µg/L	9.8	1.7	1	625	09/09/09 13:18	rselph	Q44380
2-Methylphenol	BRL	µg/L	9.8	1.8	1	625	09/09/09 13:18	rselph	Q44380
2-Nitrophenol	BRL	µg/L	9.8	2.2	1	625	09/09/09 13:18	rselph	Q44380
3&4-Methylphenol	BRL	µg/L	9.8	1.9	1	625	09/09/09 13:18	rselph	Q44380
3,3'-Dichlorobenzidine	BRL	µg/L	49	2.5	1	625	09/09/09 13:18	rselph	Q44380
4,6-Dinitro-2-methylphenol	BRL	µg/L	49	1.8	1	625	09/09/09 13:18	rselph	Q44380
4-Bromophenylphenylether	BRL	µg/L	9.8	1.9	1	625	09/09/09 13:18	rselph	Q44380
4-Chloro-3-methylphenol	BRL	µg/L	9.8	2.2	1	625	09/09/09 13:18	rselph	Q44380
4-Chlorophenylphenylether	BRL	µg/L	9.8	2.8	1	625	09/09/09 13:18	rselph	Q44380
4-Nitrophenol	BRL	µg/L	49	0.74	1	625	09/09/09 13:18	rselph	Q44380
Acenaphthene	BRL	µg/L	9.8	4.1	1	625	09/09/09 13:18	rselph	Q44380
Acenaphthylene	BRL	µg/L	9.8	2.7	1	625	09/09/09 13:18	rselph	Q44380
Anthracene	BRL	µg/L	9.8	1.7	1	625	09/09/09 13:18	rselph	Q44380
Benzo(a)anthracene	BRL	µg/L	9.8	2.1	1	625	09/09/09 13:18	rselph	Q44380
Benzo(a)pyrene	BRL	µg/L	9.8	1.6	1	625	09/09/09 13:18	rselph	Q44380
Benzo(b)fluoranthene	BRL	µg/L	9.8	1.2	1	625	09/09/09 13:18	rselph	Q44380
Benzo(g,h,i)perylene	BRL	µg/L	9.8	2.1	1	625	09/09/09 13:18	rselph	Q44380
Benzo(k)fluoranthene	BRL	µg/L	9.8	2.6	1	625	09/09/09 13:18	rselph	Q44380
Bis(2-chloroethoxy)methane	BRL	µg/L	9.8	2.3	1	625	09/09/09 13:18	rselph	Q44380
Bis(2-chloroethyl)ether	BRL	µg/L	9.8	1.9	1	625	09/09/09 13:18	rselph	Q44380
Bis(2-chloroisopropyl)ether	BRL	µg/L	9.8	2.3	1	625	09/09/09 13:18	rselph	Q44380
Bis(2-ethylhexyl)phthalate	BRL	µg/L	9.8	2.7	1	625	09/09/09 13:18	rselph	Q44380
Butylbenzylphthalate	BRL	µg/L	9.8	1.9	1	625	09/09/09 13:18	rselph	Q44380
Chrysene	BRL	µg/L	9.8	3.0	1	625	09/09/09 13:18	rselph	Q44380
Di-n-butylphthalate	BRL	µg/L	9.8	1.5	1	625	09/09/09 13:18	rselph	Q44380
Di-n-octylphthalate	BRL	µg/L	9.8	2.5	1	625	09/09/09 13:18	rselph	Q44380

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

09/14/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County Client Sample ID: SW-1
 Project No.: WBS #34599.1.1 Prism Sample ID: 256472
 Sample Matrix: Water COC Group: G0809749
 Time Collected: 08/28/09 10:45
 Time Submitted: 08/28/09 14:02

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Dibenzo(a,h)anthracene	BRL	µg/L	9.8	2.2	1	625	09/09/09 13:18	rselph	Q44380
Dibenzofuran	BRL	µg/L	9.8	3.5	1	625	09/09/09 13:18	rselph	Q44380
Diethylphthalate	BRL	µg/L	9.8	2.1	1	625	09/09/09 13:18	rselph	Q44380
Dimethylphthalate	BRL	µg/L	9.8	1.9	1	625	09/09/09 13:18	rselph	Q44380
Fluoranthene	BRL	µg/L	9.8	1.5	1	625	09/09/09 13:18	rselph	Q44380
Fluorene	BRL	µg/L	9.8	4.3	1	625	09/09/09 13:18	rselph	Q44380
Hexachlorobenzene	BRL	µg/L	9.8	2.0	1	625	09/09/09 13:18	rselph	Q44380
Hexachlorobutadiene	BRL	µg/L	9.8	1.7	1	625	09/09/09 13:18	rselph	Q44380
Hexachlorocyclopentadiene	BRL	µg/L	9.8	2.0	1	625	09/09/09 13:18	rselph	Q44380
Hexachloroethane	BRL	µg/L	9.8	2.2	1	625	09/09/09 13:18	rselph	Q44380
Indeno(1,2,3-cd)pyrene	BRL	µg/L	9.8	3.6	1	625	09/09/09 13:18	rselph	Q44380
Isophorone	BRL	µg/L	9.8	2.6	1	625	09/09/09 13:18	rselph	Q44380
N-Nitrosodi-n-propylamine	BRL	µg/L	9.8	2.2	1	625	09/09/09 13:18	rselph	Q44380
Naphthalene	BRL	µg/L	9.8	1.6	1	625	09/09/09 13:18	rselph	Q44380
Nitrobenzene	BRL	µg/L	9.8	2.1	1	625	09/09/09 13:18	rselph	Q44380
Pentachlorophenol	BRL	µg/L	9.8	2.0	1	625	09/09/09 13:18	rselph	Q44380
Phenanthrene	BRL	µg/L	9.8	1.2	1	625	09/09/09 13:18	rselph	Q44380
Phenol	BRL	µg/L	9.8	0.57	1	625	09/09/09 13:18	rselph	Q44380
Pyrene	BRL	µg/L	9.8	1.8	1	625	09/09/09 13:18	rselph	Q44380

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Project ID: NCDOT: Haywood County Client Sample ID: SW-1
 Project No.: WBS #34599.1.1 Prism Sample ID: 256472
 Sample Matrix: Water COC Group: G0809749
 Time Collected: 08/28/09 10:45
 Time Submitted: 08/28/09 14:02

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Sample Preparation:				1020 mL /	1 mL	625	09/04/09 8:00	smanivanh	P25512

Surrogate	% Recovery	Control Limits
Terphenyl-d14	120	10 - 154
Phenol-d5	28	10 - 48
Nitrobenzene-d5	92	22 - 103
2-Fluorophenol	43	10 - 59
2-Fluorobiphenyl	102	29 - 112
2,4,6-Tribromophenol	111	27 - 125

TIC's By 625

Est.Conc Units

No TICs were detected.

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a wet-weight basis

Angela D. Overcash, V.P. Laboratory Services



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Level II QC Report

09/14/09

N. C. Department of Transportation
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 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County
 Project No.: WBS #34599.1.1

COC Group Number: G0809749
 Date/Time Submitted: 08/28/09 14:02

Purgeable Halocarbons and Aromatics by GC-PID/ELCD, method 601/602

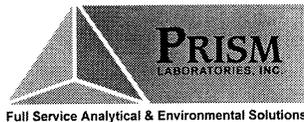
Method Blank

	Result	RL	Control Limit	Units	QC Batch ID
1,1,1-Trichloroethane	ND	1	<0.5	µg/L	Q44354
1,1,2,2-Tetrachloroethane	ND	1	<0.5	µg/L	Q44354
1,1,2-Trichloroethane	ND	1	<0.5	µg/L	Q44354
1,1-Dichloroethane	ND	1	<0.5	µg/L	Q44354
1,1-Dichloroethene	ND	1	<0.5	µg/L	Q44354
1,2-Dibromoethane (EDB)	ND	1	<0.5	µg/L	Q44354
1,2-Dichlorobenzene	ND	1	<0.5	µg/L	Q44354
1,2-Dichloroethane	ND	1	<0.5	µg/L	Q44354
1,2-Dichloropropane	ND	1	<0.5	µg/L	Q44354
1,3-Dichlorobenzene	ND	1	<0.5	µg/L	Q44354
1,4-Dichlorobenzene	ND	1	<0.5	µg/L	Q44354
Benzene	ND	0.5	<0.25	µg/L	Q44354
Bromodichloromethane	ND	1	<0.5	µg/L	Q44354
Bromoform	ND	1	<0.5	µg/L	Q44354
Bromomethane	ND	5	<2.5	µg/L	Q44354
Carbon tetrachloride	ND	1	<0.5	µg/L	Q44354
Chlorobenzene	ND	1	<0.5	µg/L	Q44354
Chloroethane	ND	5	<2.5	µg/L	Q44354
Chloroform	ND	1	<0.5	µg/L	Q44354
Chloromethane	ND	5	<2.5	µg/L	Q44354
cis-1,2-Dichloroethene	ND	1	<0.5	µg/L	Q44354
cis-1,3-Dichloropropene	ND	1	<0.5	µg/L	Q44354
Dibromochloromethane	ND	1	<0.5	µg/L	Q44354
Dichlorodifluoromethane	ND	5	<2.5	µg/L	Q44354
Ethylbenzene	ND	1	<0.5	µg/L	Q44354
Isopropyl ether (IPE)	ND	5	<2.5	µg/L	Q44354
m,p-Xylenes	ND	2	<1	µg/L	Q44354
Methyl t-butyl ether (MTBE)	ND	5	<2.5	µg/L	Q44354
Methylene Chloride	ND	1	<0.5	µg/L	Q44354
Naphthalene	ND	1	<0.5	µg/L	Q44354
o-Xylene	ND	1	<0.5	µg/L	Q44354
Tetrachloroethene	ND	1	<0.5	µg/L	Q44354
Toluene	ND	1	<0.5	µg/L	Q44354
trans-1,2-Dichloroethene	ND	1	<0.5	µg/L	Q44354

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Level II QC Report

09/14/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County
 Project No.: WBS #34599.1.1

COC Group Number: G0809749
 Date/Time Submitted: 08/28/09 14:02

Method Blank

	Result	RL	Control Limit	Units	QC Batch ID
trans-1,3-Dichloropropene	ND	1	<0.5	µg/L	Q44354
Trichloroethene	ND	1	<0.5	µg/L	Q44354
Trichlorofluoromethane	ND	5	<2.5	µg/L	Q44354
Vinyl chloride	ND	1	<0.5	µg/L	Q44354

Laboratory Control Sample

	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
1,1,1-Trichloroethane	20.065	20	µg/L	100	41-138	Q44354
1,1,2,2-Tetrachloroethane	22.838	20	µg/L	114	10-184	Q44354
1,1,2-Trichloroethane	21.427	20	µg/L	107	39-136	Q44354
1,1-Dichloroethane	21.151	20	µg/L	106	47-132	Q44354
1,1-Dichloroethene	18.946	20	µg/L	95	28-167	Q44354
1,2-Dibromoethane (EDB)	16.483	20	µg/L	82	78-131	Q44354
1,2-Dichlorobenzene	18.514	20	µg/L	93	37-154	Q44354
1,2-Dichloroethane	23.324	20	µg/L	117	51-147	Q44354
1,2-Dichloropropane	20.445	20	µg/L	102	44-156	Q44354
1,3-Dichlorobenzene	18.485	20	µg/L	92	50-141	Q44354
1,4-Dichlorobenzene	18.451	20	µg/L	92	42-143	Q44354
Benzene	21.2	20	µg/L	106	39-150	Q44354
Bromodichloromethane	19.278	20	µg/L	96	42-172	Q44354
Bromoform	15.421	20	µg/L	77	13-159	Q44354
Bromomethane	20.73	20	µg/L	104	10-144	Q44354
Carbon tetrachloride	20.107	20	µg/L	101	43-143	Q44354
Chlorobenzene	17.251	20	µg/L	86	38-150	Q44354
Chloroethane	18.477	20	µg/L	92	46-137	Q44354
Chloroform	23.57	20	µg/L	118	49-133	Q44354
Chloromethane	19.706	20	µg/L	99	10-193	Q44354
cis-1,2-Dichloroethene	18.65	20	µg/L	93	62-145	Q44354
cis-1,3-Dichloropropene	22.911	20	µg/L	115	22-178	Q44354
Dibromochloromethane	20.282	20	µg/L	101	24-191	Q44354
Dichlorodifluoromethane	20.186	20	µg/L	101	48-148	Q44354
Ethylbenzene	20.296	20	µg/L	101	32-160	Q44354
Isopropyl ether (IPE)	16.665	20	µg/L	83	61-134	Q44354
m,p-Xylenes	39.203	40	µg/L	98	69-130	Q44354
Methyl t-butyl ether (MTBE)	18.39	20	µg/L	92	74-130	Q44354
Methylene Chloride	19.456	20	µg/L	97	25-162	Q44354
Naphthalene	23.31	20	µg/L	117	60-136	Q44354

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Level II QC Report

09/14/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County
 Project No.: WBS #34599.1.1

COC Group Number: G0809749
 Date/Time Submitted: 08/28/09 14:02

Laboratory Control Sample	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
o-Xylene	23.355	20	µg/L	117	66-129	Q44354
Tetrachloroethene	18.917	20	µg/L	95	26-162	Q44354
Toluene	19.909	20	µg/L	100	46-148	Q44354
trans-1,2-Dichloroethene	17.382	20	µg/L	87	38-155	Q44354
trans-1,3-Dichloropropene	21.287	20	µg/L	106	22-178	Q44354
Trichloroethene	18.303	20	µg/L	92	35-146	Q44354
Trichlorofluoromethane	24.118	20	µg/L	121	21-156	Q44354
Vinyl chloride	20.386	20	µg/L	102	28-163	Q44354

Matrix Spike	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
Sample ID: 256705 1,1,1-Trichloroethane	77.256	80	µg/L	97	41-138	Q44354
1,1,2,2-Tetrachloroethane	91.42	80	µg/L	114	10-184	Q44354
1,1,2-Trichloroethane	83.36	80	µg/L	104	39-136	Q44354
1,1-Dichloroethane	70.668	80	µg/L	88	47-132	Q44354
1,1-Dichloroethene	71.548	80	µg/L	89	28-167	Q44354
1,2-Dibromoethane (EDB)	63.792	80	µg/L	80	78-131	Q44354
1,2-Dichlorobenzene	71.496	80	µg/L	89	37-154	Q44354
1,2-Dichloroethane	89.784	80	µg/L	112	51-147	Q44354
1,2-Dichloropropane	77.26	80	µg/L	97	44-156	Q44354
1,3-Dichlorobenzene	69.532	80	µg/L	87	50-141	Q44354
1,4-Dichlorobenzene	70.632	80	µg/L	88	42-143	Q44354
Benzene	72.592	80	µg/L	91	39-150	Q44354
Bromodichloromethane	73.8	80	µg/L	92	42-172	Q44354
Bromoform	64.348	80	µg/L	80	13-159	Q44354
Bromomethane	85.516	80	µg/L	107	10-144	Q44354
Carbon tetrachloride	77.684	80	µg/L	97	43-143	Q44354
Chlorobenzene	65.536	80	µg/L	82	38-150	Q44354
Chloroethane	75.504	80	µg/L	94	46-137	Q44354
Chloroform	87.896	80	µg/L	110	49-133	Q44354
Chloromethane	95.452	80	µg/L	119	10-193	Q44354
cis-1,2-Dichloroethene	70.16	80	µg/L	88	57-137	Q44354
cis-1,3-Dichloropropene	84.384	80	µg/L	105	22-178	Q44354
Dibromochloromethane	78.148	80	µg/L	98	24-191	Q44354
Dichlorodifluoromethane	112.184	80	µg/L	140	47-143	Q44354
Ethylbenzene	77.16	80	µg/L	96	32-160	Q44354
Isopropyl ether (IPE)	63.328	80	µg/L	79	60-132	Q44354

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Level II QC Report

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 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County
 Project No.: WBS #34599.1.1

COC Group Number: G0809749
 Date/Time Submitted: 08/28/09 14:02

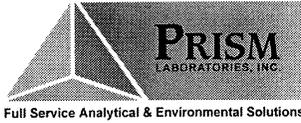
Matrix Spike		Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
Sample ID:							
256705	m,p-Xylenes	150.068	160	µg/L	94	59-126	Q44354
	Methyl t-butyl ether (MTBE)	75.128	80	µg/L	94	73-130	Q44354
	Methylene Chloride	75.608	80	µg/L	95	25-162	Q44354
	Naphthalene	91.124	80	µg/L	114	58-132	Q44354
	o-Xylene	79.728	80	µg/L	100	62-125	Q44354
	Tetrachloroethene	70.54	80	µg/L	88	26-162	Q44354
	Toluene	73.484	80	µg/L	92	46-148	Q44354
	trans-1,2-Dichloroethene	66.38	80	µg/L	83	38-155	Q44354
	trans-1,3-Dichloropropene	80.784	80	µg/L	101	22-178	Q44354
	Trichloroethene	65.416	80	µg/L	82	35-146	Q44354
	Trichlorofluoromethane	70.968	80	µg/L	89	21-156	Q44354
	Vinyl chloride	80.192	80	µg/L	100	28-163	Q44354

Matrix Spike Duplicate		Result	Spike Amount	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
Sample ID:									
256705	1,1,1-Trichloroethane	78.4	80	µg/L	98	41-138	1	0 - 16	Q44354
	1,1,2,2-Tetrachloroethane	94.852	80	µg/L	119	10-184	4	0 - 14	Q44354
	1,1,2-Trichloroethane	87.308	80	µg/L	109	39-136	5	0 - 13	Q44354
	1,1-Dichloroethane	80.496	80	µg/L	101	47-132	13	0 - 14	Q44354
	1,1-Dichloroethene	71.128	80	µg/L	89	28-167	1	0 - 17	Q44354
	1,2-Dibromoethane (EDB)	67.156	80	µg/L	84	78-131	5	0 - 13	Q44354
	1,2-Dichlorobenzene	71.456	80	µg/L	89	37-154	0	0 - 15	Q44354
	1,2-Dichloroethane	93.36	80	µg/L	117	51-147	4	0 - 15	Q44354
	1,2-Dichloropropane	80.796	80	µg/L	101	44-156	4	0 - 12	Q44354
	1,3-Dichlorobenzene	69.152	80	µg/L	86	50-141	1	0 - 13	Q44354
	1,4-Dichlorobenzene	71.072	80	µg/L	89	42-143	1	0 - 14	Q44354
	Benzene	73.904	80	µg/L	92	39-150	2	0 - 12	Q44354
	Bromodichloromethane	76.516	80	µg/L	96	42-172	4	0 - 11	Q44354
	Bromoform	63.976	80	µg/L	80	13-159	1	0 - 10	Q44354
	Bromomethane	86.812	80	µg/L	109	10-144	2	0 - 21	Q44354
	Carbon tetrachloride	79.612	80	µg/L	100	43-143	2	0 - 14	Q44354
	Chlorobenzene	66.712	80	µg/L	83	38-150	2	0 - 12	Q44354
	Chloroethane	75.748	80	µg/L	95	46-137	0	0 - 18	Q44354
	Chloroform	91.488	80	µg/L	114	49-133	4	0 - 13	Q44354
	Chloromethane	95.164	80	µg/L	119	10-193	0	0 - 21	Q44354
	cis-1,2-Dichloroethene	72.068	80	µg/L	90	57-137	3	0 - 15	Q44354
	cis-1,3-Dichloropropene	87.16	80	µg/L	109	22-178	3	0 - 13	Q44354

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Level II QC Report

09/14/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County
 Project No.: WBS #34599.1.1

COC Group Number: G0809749
 Date/Time Submitted: 08/28/09 14:02

Matrix Spike Duplicate

Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
256705 Dibromochloromethane	82.088	80	µg/L	103	24-191	5	0 - 10	Q44354
Dichlorodifluoromethane	111.644	80	µg/L	140	47-143	0	0 - 21	Q44354
Ethylbenzene	76.552	80	µg/L	96	32-160	1	0 - 10	Q44354
Isopropyl ether (IPE)	65.04	80	µg/L	81	60-132	3	0 - 15	Q44354
m,p-Xylenes	149.04	160	µg/L	93	59-126	1	0 - 11	Q44354
Methyl t-butyl ether (MTBE)	78.512	80	µg/L	98	73-130	4	0 - 16	Q44354
Methylene Chloride	79.528	80	µg/L	99	25-162	5	0 - 16	Q44354
Naphthalene	92.064	80	µg/L	115	58-132	1	0 - 17	Q44354
o-Xylene	75.42	80	µg/L	94	62-125	6	0 - 13	Q44354
Tetrachloroethene	71.528	80	µg/L	89	26-162	1	0 - 14	Q44354
Toluene	74.484	80	µg/L	93	46-148	1	0 - 11	Q44354
trans-1,2-Dichloroethene	67.024	80	µg/L	84	38-155	1	0 - 17	Q44354
trans-1,3-Dichloropropene	83.844	80	µg/L	105	22-178	4	0 - 10	Q44354
Trichloroethene	66.368	80	µg/L	83	35-146	1	0 - 14	Q44354
Trichlorofluoromethane	72.62	80	µg/L	91	21-156	2	0 - 19	Q44354
Vinyl chloride	73.56	80	µg/L	92	28-163	9	0 - 20	Q44354

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 Date/Time Submitted: 08/28/09 14:02

Semivolatile Organic Compounds by GC/MS, method 625

Method Blank	Result	RL	Control Limit	Units	QC Batch ID
1,2,4-Trichlorobenzene	ND	10	<5	µg/L	Q44380
1,2-Dichlorobenzene	ND	10	<5	µg/L	Q44380
1,3-Dichlorobenzene	ND	10	<5	µg/L	Q44380
1,4-Dichlorobenzene	ND	10	<5	µg/L	Q44380
2,4,5-Trichlorophenol	ND	10	<5	µg/L	Q44380
2,4,6-Trichlorophenol	ND	10	<5	µg/L	Q44380
2,4-Dichlorophenol	ND	10	<5	µg/L	Q44380
2,4-Dimethylphenol	ND	10	<5	µg/L	Q44380
2,4-Dinitrophenol	ND	50	<25	µg/L	Q44380
2,4-Dinitrotoluene	ND	10	<5	µg/L	Q44380
2,6-Dinitrotoluene	ND	10	<5	µg/L	Q44380
2-Chloronaphthalene	ND	10	<5	µg/L	Q44380
2-Chlorophenol	ND	10	<5	µg/L	Q44380
2-Methylphenol	ND	10	<5	µg/L	Q44380
2-Nitrophenol	ND	10	<5	µg/L	Q44380
3&4-Methylphenol	ND	10	<5	µg/L	Q44380
3,3'-Dichlorobenzidine	ND	50	<25	µg/L	Q44380
4,6-Dinitro-2-methylphenol	ND	50	<25	µg/L	Q44380
4-Bromophenylphenylether	ND	10	<5	µg/L	Q44380
4-Chloro-3-methylphenol	ND	10	<5	µg/L	Q44380
4-Chlorophenylphenylether	ND	10	<5	µg/L	Q44380
4-Nitrophenol	ND	50	<25	µg/L	Q44380
Acenaphthene	ND	10	<5	µg/L	Q44380
Acenaphthylene	ND	10	<5	µg/L	Q44380
Anthracene	ND	10	<5	µg/L	Q44380
Benzo(a)anthracene	ND	10	<5	µg/L	Q44380
Benzo(a)pyrene	ND	10	<5	µg/L	Q44380
Benzo(b)fluoranthene	ND	10	<5	µg/L	Q44380
Benzo(g,h,i)perylene	ND	10	<5	µg/L	Q44380
Benzo(k)fluoranthene	ND	10	<5	µg/L	Q44380
Bis(2-chloroethoxy)methane	ND	10	<5	µg/L	Q44380
Bis(2-chloroethyl)ether	ND	10	<5	µg/L	Q44380
Bis(2-chloroisopropyl)ether	ND	10	<5	µg/L	Q44380
Bis(2-ethylhexyl)phthalate	ND	10	<5	µg/L	Q44380

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 Project No.: WBS #34599.1.1

COC Group Number: G0809749
 Date/Time Submitted: 08/28/09 14:02

Method Blank

	Result	RL	Control Limit	Units	QC Batch ID
Butylbenzylphthalate	ND	10	<5	µg/L	Q44380
Chrysene	ND	10	<5	µg/L	Q44380
Di-n-butylphthalate	ND	10	<5	µg/L	Q44380
Di-n-octylphthalate	ND	10	<5	µg/L	Q44380
Dibenzo(a,h)anthracene	ND	10	<5	µg/L	Q44380
Dibenzofuran	ND	10	<5	µg/L	Q44380
Diethylphthalate	ND	10	<5	µg/L	Q44380
Dimethylphthalate	ND	10	<5	µg/L	Q44380
Fluoranthene	ND	10	<5	µg/L	Q44380
Fluorene	ND	10	<5	µg/L	Q44380
Hexachlorobenzene	ND	10	<5	µg/L	Q44380
Hexachlorobutadiene	ND	10	<5	µg/L	Q44380
Hexachlorocyclopentadiene	ND	10	<5	µg/L	Q44380
Hexachloroethane	ND	10	<5	µg/L	Q44380
Indeno(1,2,3-cd)pyrene	ND	10	<5	µg/L	Q44380
Isophorone	ND	10	<5	µg/L	Q44380
N-Nitrosodi-n-propylamine	ND	10	<5	µg/L	Q44380
Naphthalene	ND	10	<5	µg/L	Q44380
Nitrobenzene	ND	10	<5	µg/L	Q44380
Pentachlorophenol	ND	10	<5	µg/L	Q44380
Phenanthrene	ND	10	<5	µg/L	Q44380
Phenol	ND	10	<5	µg/L	Q44380
Pyrene	ND	10	<5	µg/L	Q44380

Laboratory Control Sample

	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
1,2,4-Trichlorobenzene	79.63	100	µg/L	80	44-142	Q44380
1,2-Dichlorobenzene	79.27	100	µg/L	79	32-129	Q44380
1,3-Dichlorobenzene	77.87	100	µg/L	78	20-124	Q44380
1,4-Dichlorobenzene	78.68	100	µg/L	79	20-124	Q44380
2,4,6-Trichlorophenol	99.95	100	µg/L	100	37-144	Q44380
2,4-Dichlorophenol	82.74	100	µg/L	83	39-135	Q44380
2,4-Dimethylphenol	81.39	100	µg/L	81	32-119	Q44380
2,4-Dinitrophenol	86.63	100	µg/L	87	10-191	Q44380
2,4-Dinitrotoluene	125.72	100	µg/L	126	39-139	Q44380
2,6-Dinitrotoluene	118.1	100	µg/L	118	50-158	Q44380
2-Chloronaphthalene	90.14	100	µg/L	90	60-118	Q44380

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Project ID: NCDOT: Haywood County
 Project No.: WBS #34599.1.1

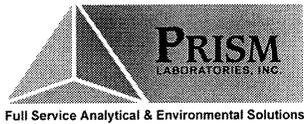
COC Group Number: G0809749
 Date/Time Submitted: 08/28/09 14:02

Laboratory Control Sample	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
2-Chlorophenol	69.93	100	µg/L	70	23-134	Q44380
2-Nitrophenol	84.14	100	µg/L	84	29-182	Q44380
3&4-Methylphenol	56.94	100	µg/L	57	10-98	Q44380
3,3'-Dichlorobenzidine	115.17	100	µg/L	115	10-262	Q44380
4,6-Dinitro-2-methylphenol	107.9	100	µg/L	108	10-181	Q44380
4-Bromophenylphenylether	102.95	100	µg/L	103	53-127	Q44380
4-Chloro-3-methylphenol	90.25	100	µg/L	90	22-147	Q44380
4-Chlorophenylphenylether	108.58	100	µg/L	109	25-158	Q44380
4-Nitrophenol	35.33	100	µg/L	35	10-132	Q44380
Acenaphthene	101.09	100	µg/L	101	47-145	Q44380
Acenaphthylene	99.3	100	µg/L	99	33-145	Q44380
Anthracene	107.23	100	µg/L	107	27-133	Q44380
Benzo(a)anthracene	116.48	100	µg/L	116	33-143	Q44380
Benzo(a)pyrene	126.5	100	µg/L	127	17-163	Q44380
Benzo(b)fluoranthene	126.91	100	µg/L	127	24-159	Q44380
Benzo(g,h,i)perylene	110.13	100	µg/L	110	10-219	Q44380
Benzo(k)fluoranthene	121.7	100	µg/L	122	11-162	Q44380
Bis(2-chloroethoxy)methane	81.63	100	µg/L	82	33-184	Q44380
Bis(2-chloroethyl)ether	77.7	100	µg/L	78	12-158	Q44380
Bis(2-chloroisopropyl)ether	85.89	100	µg/L	86	36-166	Q44380
Bis(2-ethylhexyl)phthalate	125.47	100	µg/L	125	10-158	Q44380
Butylbenzylphthalate	127.14	100	µg/L	127	10-152	Q44380
Chrysene	109.56	100	µg/L	110	17-168	Q44380
Di-n-butylphthalate	101.37	100	µg/L	101	10-118	Q44380
Di-n-octylphthalate	151.98	100	µg/L	152 #	10-146	Q44380
Dibenzo(a,h)anthracene	116.96	100	µg/L	117	10-227	Q44380
Diethylphthalate	112.99	100	µg/L	113	10-114	Q44380
Dimethylphthalate	105.66	100	µg/L	106	10-112	Q44380
Fluoranthene	101.65	100	µg/L	102	26-137	Q44380
Fluorene	108.21	100	µg/L	108	59-121	Q44380
Hexachlorobenzene	99.54	100	µg/L	100	10-152	Q44380
Hexachlorobutadiene	79.01	100	µg/L	79	24-116	Q44380
Hexachlorocyclopentadiene	73.06	100	µg/L	73	32-103	Q44380
Hexachloroethane	74.11	100	µg/L	74	40-113	Q44380
Indeno(1,2,3-cd)pyrene	109.98	100	µg/L	110	10-171	Q44380
Isophorone	105.09	100	µg/L	105	21-196	Q44380

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Level II QC Report

09/14/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County
 Project No.: WBS #34599.1.1

COC Group Number: G0809749
 Date/Time Submitted: 08/28/09 14:02

Laboratory Control Sample	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
N-Nitrosodi-n-propylamine	76.23	100	µg/L	76	10-230	Q44380
Naphthalene	82.86	100	µg/L	83	21-133	Q44380
Nitrobenzene	86.88	100	µg/L	87	35-180	Q44380
Pentachlorophenol	102.33	100	µg/L	102	14-176	Q44380
Phenanthrene	101.06	100	µg/L	101	54-120	Q44380
Phenol	32.98	100	µg/L	33	10-112	Q44380
Pyrene	118.04	100	µg/L	118 #	52-115	Q44380

Matrix Spike	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
Sample ID: 256469 1,2,4-Trichlorobenzene	153.882	196.07	µg/L	78	44-142	Q44380
1,2-Dichlorobenzene	145.019	196.07	µg/L	74	32-129	Q44380
1,3-Dichlorobenzene	140.843	196.07	µg/L	72	20-124	Q44380
1,4-Dichlorobenzene	143.392	196.07	µg/L	73	20-124	Q44380
2,4,6-Trichlorophenol	149.882	196.07	µg/L	76	37-144	Q44380
2,4-Dichlorophenol	159.627	196.07	µg/L	81	39-135	Q44380
2,4-Dimethylphenol	144.431	196.07	µg/L	74	32-119	Q44380
2,4-Dinitrophenol	44.4705	196.07	µg/L	23	10-191	Q44380
2,4-Dinitrotoluene	239.372	196.07	µg/L	122	39-139	Q44380
2,6-Dinitrotoluene	223.137	196.07	µg/L	114	50-158	Q44380
2-Chloronaphthalene	175.725	196.07	µg/L	90	60-118	Q44380
2-Chlorophenol	134.176	196.07	µg/L	68	23-134	Q44380
2-Nitrophenol	154.019	196.07	µg/L	79	29-182	Q44380
3&4-Methylphenol	129.509	196.07	µg/L	66	15-107	Q44380
3,3'-Dichlorobenzidine	206.941	196.07	µg/L	106	10-262	Q44380
4,6-Dinitro-2-methylphenol	95.1960	196.07	µg/L	49	10-181	Q44380
4-Bromophenylphenylether	200.921	196.07	µg/L	102	53-127	Q44380
4-Chloro-3-methylphenol	185.372	196.07	µg/L	95	22-147	Q44380
4-Chlorophenylphenylether	204.098	196.07	µg/L	104	25-158	Q44380
4-Nitrophenol	46.3725	196.07	µg/L	24	10-132	Q44380
Acenaphthene	194.274	196.07	µg/L	99	47-145	Q44380
Acenaphthylene	190.431	196.07	µg/L	97	33-145	Q44380
Anthracene	208.372	196.07	µg/L	106	27-133	Q44380
Benzo(a)anthracene	226.529	196.07	µg/L	116	33-143	Q44380
Benzo(a)pyrene	239.196	196.07	µg/L	122	17-163	Q44380
Benzo(b)fluoranthene	237.490	196.07	µg/L	121	24-159	Q44380
Benzo(g,h,i)perylene	209.137	196.07	µg/L	107	10-219	Q44380

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Project ID: NCDOT: Haywood County
 Project No.: WBS #34599.1.1

COC Group Number: G0809749
 Date/Time Submitted: 08/28/09 14:02

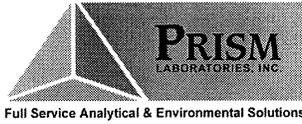
Matrix Spike		Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
Sample ID:							
256469	Benzo(k)fluoranthene	228.529	196.07	µg/L	117	11-162	Q44380
	Bis(2-chloroethoxy)methane	158.960	196.07	µg/L	81	33-184	Q44380
	Bis(2-chloroethyl)ether	142.529	196.07	µg/L	73	12-158	Q44380
	Bis(2-chloroisopropyl)ether	160.019	196.07	µg/L	82	36-166	Q44380
	Bis(2-ethylhexyl)phthalate	239.196	196.07	µg/L	122	10-158	Q44380
	Butylbenzylphthalate	245.313	196.07	µg/L	125	10-152	Q44380
	Chrysene	213.627	196.07	µg/L	109	17-168	Q44380
	Di-n-butylphthalate	196.862	196.07	µg/L	100	10-118	Q44380
	Di-n-octylphthalate	273.098	196.07	µg/L	139	10-146	Q44380
	Dibenzo(a,h)anthracene	217.372	196.07	µg/L	111	10-227	Q44380
	Diethylphthalate	215.313	196.07	µg/L	110	10-114	Q44380
	Dimethylphthalate	213.470	196.07	µg/L	109	10-112	Q44380
	Fluoranthene	195.627	196.07	µg/L	100	26-137	Q44380
	Fluorene	202.392	196.07	µg/L	103	59-121	Q44380
	Hexachlorobenzene	193.078	196.07	µg/L	98	10-152	Q44380
	Hexachlorobutadiene	148.392	196.07	µg/L	76	24-116	Q44380
	Hexachlorocyclopentadiene	141.705	196.07	µg/L	72	48-94	Q44380
	Hexachloroethane	134.078	196.07	µg/L	68	40-113	Q44380
	Indeno(1,2,3-cd)pyrene	213.980	196.07	µg/L	109	10-171	Q44380
	Isophorone	206.745	196.07	µg/L	105	21-196	Q44380
	N-Nitrosodi-n-propylamine	150.803	196.07	µg/L	77	10-230	Q44380
	Naphthalene	159.803	196.07	µg/L	82	21-133	Q44380
	Nitrobenzene	164.333	196.07	µg/L	84	35-180	Q44380
	Pentachlorophenol	76.8039	196.07	µg/L	39	14-176	Q44380
	Phenanthrene	194.980	196.07	µg/L	99	54-120	Q44380
	Phenol	81.4313	196.07	µg/L	42	10-112	Q44380
	Pyrene	225.352	196.07	µg/L	115	52-115	Q44380

Matrix Spike Duplicate		Result	Spike Amount	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
Sample ID:									
256469	1,2,4-Trichlorobenzene	182.392	196.07	µg/L	93	44-142	17	0 - 36	Q44380
	1,2-Dichlorobenzene	178.196	196.07	µg/L	91	32-129	21	0 - 38	Q44380
	1,3-Dichlorobenzene	173.196	196.07	µg/L	88	20-124	21	0 - 41	Q44380
	1,4-Dichlorobenzene	175.862	196.07	µg/L	90	20-124	20	0 - 36	Q44380
	2,4,6-Trichlorophenol	162.313	196.07	µg/L	83	37-144	8	0 - 30	Q44380
	2,4-Dichlorophenol	180.882	196.07	µg/L	92	39-135	12	0 - 31	Q44380
	2,4-Dimethylphenol	160.686	196.07	µg/L	82	32-119	11	0 - 26	Q44380

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Project ID: NCDOT: Haywood County
 Project No.: WBS #34599.1.1

COC Group Number: G0809749
 Date/Time Submitted: 08/28/09 14:02

Matrix Spike Duplicate

Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
256469 2,4-Dinitrophenol	48.3921	196.07	µg/L	25	10-191	8	0 - 30	Q44380
2,4-Dinitrotoluene	241.823	196.07	µg/L	123	39-139	1	0 - 29	Q44380
2,6-Dinitrotoluene	230.960	196.07	µg/L	118	50-158	3	0 - 15	Q44380
2-Chloronaphthalene	197.372	196.07	µg/L	101	60-118	12	0 - 21	Q44380
2-Chlorophenol	160.803	196.07	µg/L	82	23-134	18	0 - 35	Q44380
2-Nitrophenol	184	196.07	µg/L	94	29-182	18	0 - 34	Q44380
3&4-Methylphenol	141.627	196.07	µg/L	72	15-107	9	0 - 27	Q44380
3,3'-Dichlorobenzidine	212.019	196.07	µg/L	108	10-262	2	0 - 50	Q44380
4,6-Dinitro-2-methylphenol	96.3725	196.07	µg/L	49	10-181	1	0 - 19	Q44380
4-Bromophenylphenylether	210.901	196.07	µg/L	108	53-127	5	0 - 18	Q44380
4-Chloro-3-methylphenol	195.235	196.07	µg/L	100	22-147	5	0 - 33	Q44380
4-Chlorophenylphenylether	215.235	196.07	µg/L	110	25-158	5	0 - 19	Q44380
4-Nitrophenol	39.7450	196.07	µg/L	20	10-132	15	0 - 50	Q44380
Acenaphthene	211.019	196.07	µg/L	108	47-145	8	0 - 20	Q44380
Acenaphthylene	207.549	196.07	µg/L	106	33-145	9	0 - 24	Q44380
Anthracene	212.313	196.07	µg/L	108	27-133	2	0 - 30	Q44380
Benzo(a)anthracene	222.901	196.07	µg/L	114	33-143	2	0 - 26	Q44380
Benzo(a)pyrene	232.568	196.07	µg/L	119	17-163	3	0 - 25	Q44380
Benzo(b)fluoranthene	227.666	196.07	µg/L	116	24-159	4	0 - 29	Q44380
Benzo(g,h,i)perylene	212.058	196.07	µg/L	108	10-219	1	0 - 27	Q44380
Benzo(k)fluoranthene	221.666	196.07	µg/L	113	11-162	3	0 - 11	Q44380
Bis(2-chloroethoxy)methane	187	196.07	µg/L	95	33-184	16	0 - 31	Q44380
Bis(2-chloroethyl)ether	174.941	196.07	µg/L	89	12-158	20	0 - 36	Q44380
Bis(2-chloroisopropyl)ether	194.098	196.07	µg/L	99	36-166	19	0 - 40	Q44380
Bis(2-ethylhexyl)phthalate	225.529	196.07	µg/L	115	10-158	6	0 - 17	Q44380
Butylbenzylphthalate	235.215	196.07	µg/L	120	10-152	4	0 - 15	Q44380
Chrysene	213.156	196.07	µg/L	109	17-168	0	0 - 25	Q44380
Di-n-butylphthalate	196	196.07	µg/L	100	10-118	0	0 - 27	Q44380
Di-n-octylphthalate	251.921	196.07	µg/L	128	10-146	8	0 - 17	Q44380
Dibenzo(a,h)anthracene	222.313	196.07	µg/L	113	10-227	2	0 - 28	Q44380
Diethylphthalate	218.862	196.07	µg/L	112	10-114	2	0 - 16	Q44380
Dimethylphthalate	222.980	196.07	µg/L	114 #	10-112	4	0 - 15	Q44380
Fluoranthene	192	196.07	µg/L	98	26-137	2	0 - 24	Q44380
Fluorene	211.470	196.07	µg/L	108	59-121	4	0 - 15	Q44380
Hexachlorobenzene	195.588	196.07	µg/L	100	10-152	1	0 - 18	Q44380
Hexachlorobutadiene	180.372	196.07	µg/L	92	24-116	19	0 - 34	Q44380

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Level II QC Report

09/14/09

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Haywood County
 Project No.: WBS #34599.1.1

COC Group Number: G0809749
 Date/Time Submitted: 08/28/09 14:02

Matrix Spike Duplicate

Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
256469 Hexachlorocyclopentadiene	163.921	196.07	µg/L	84	48-94	15	0 - 30	Q44380
Hexachloroethane	168.823	196.07	µg/L	86	40-113	23	0 - 38	Q44380
Indeno(1,2,3-cd)pyrene	215.627	196.07	µg/L	110	10-171	1	0 - 29	Q44380
Isophorone	233.686	196.07	µg/L	119	21-196	12	0 - 32	Q44380
N-Nitrosodi-n-propylamine	175.176	196.07	µg/L	89	10-230	15	0 - 36	Q44380
Naphthalene	186.647	196.07	µg/L	95	21-133	15	0 - 42	Q44380
Nitrobenzene	198.039	196.07	µg/L	101	35-180	19	0 - 25	Q44380
Pentachlorophenol	70.7647	196.07	µg/L	36	14-176	8	0 - 21	Q44380
Phenanthrene	198.862	196.07	µg/L	101	54-120	2	0 - 29	Q44380
Phenol	87.8431	196.07	µg/L	45	10-112	8	0 - 39	Q44380
Pyrene	216.901	196.07	µg/L	111	52-115	4	0 - 15	Q44380

#-See Case Narrative

